

CIO

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A graphic featuring three interlocking gears. The leftmost gear is orange and has a circuit board pattern on its face. The middle gear is blue with a circuit board pattern. The rightmost gear is tan with a gear-tooth pattern. A black horizontal band with white text is superimposed over the center of the gears.

24th ANNUAL **CIO 100** AWARDS

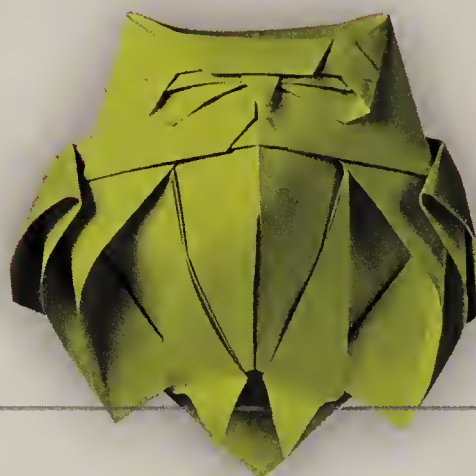
This year's winning companies show the power of
innovative IT to transform business

BY KIM S. NASH **42**

PLUS

The CIO 100 List

Read about all the winners
and their projects **33**



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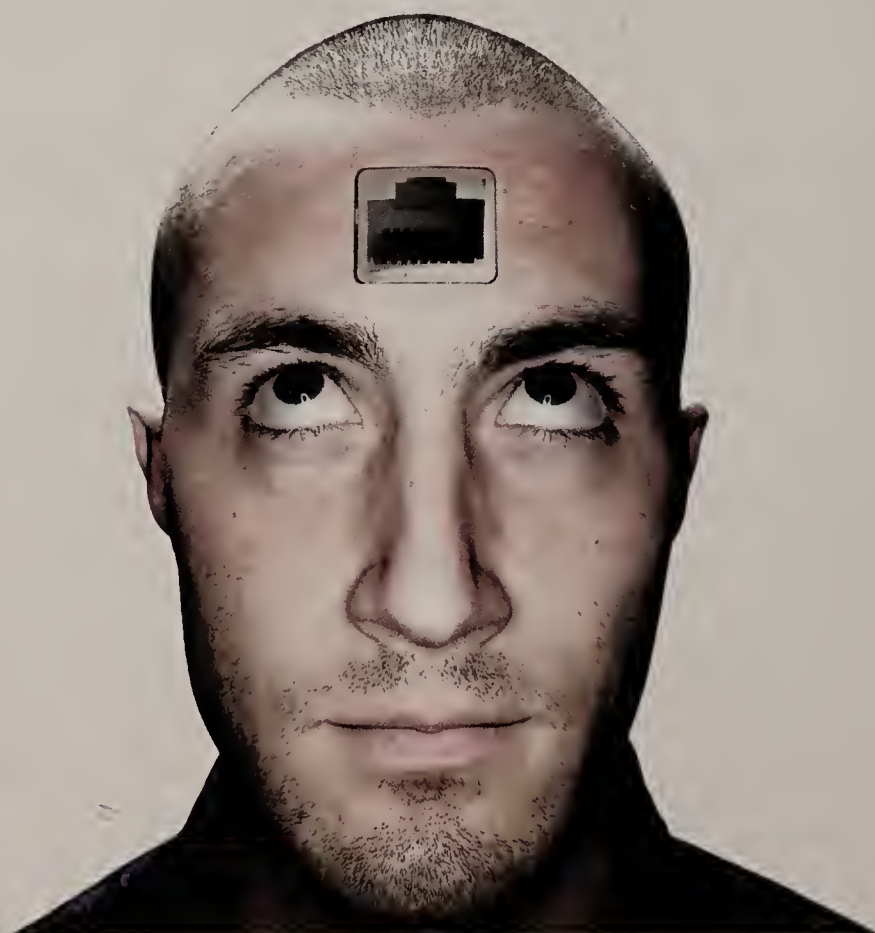
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24th ANNUAL CIO 100 AWARDS

Growth Curve 42

COVER STORY This year's winning companies show the power of **innovative IT** to **transform business**

BY KIM S. NASH

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FROM THE
EDITOR IN CHIEF

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CHATTER

Setting the Pace

What happens when that legendary dividing line between IT and “the business” starts to blur—or, even better, vanishes entirely? What can companies accomplish when innovation really becomes everybody’s business?

This CIO 100 Awards issue is packed with answers to those questions. “Companies at their best have nothing to align,” as Senior Editor Kim S. Nash writes in our cover story (“Growth Curve,” Page 42), “and they set the pace for their competitors.”

They also break into new markets and rake in revenue. They crank out game-changing analytics or manage data in profitable new ways. They use simulation tools to turn a risky acquisition into a successful merger.

All of those stories and more emerged from our 24th annual CIO 100 Awards. Business transformation and corporate growth were the hallmarks of many of the winning projects this year. Many of these projects were also at the heart of evolving business strategies—often they were the latest in a series of significant IT milestones.

This year we saw a greater concentration of projects using business intelligence, mobility or cloud solutions, but the types technologies used were as diverse as the business drivers at each company. Dreamworks Animation, for example, hit its business goal of releasing three animated movies in 2010 by consolidating siloed operations into one converged IT infrastructure. The Gap deployed mobile point-of-sale systems on iPod Touches so clerks could snag sales from impatient customers anywhere in the store.

More than 300 organizations competed for a CIO 100 Award this year, submitting their most innovative, value-producing IT and business projects to be judged by our 42-member panel of industry experts, former CIOs and leading academics (listed on Page 49). A full list of the winning companies and their project details is also available online at CIO.com.

If you’d like the chance to talk firsthand with the people behind these impressive projects, there’s still time to join us at the CIO 100 Symposium in Colorado Springs, Colo., from Aug. 14th-16th. We’ve packed the conference with expert presentations, peer workshops and panels featuring best-selling business book authors alongside CIOs and senior IT executives from Pfizer, FedEx Services, Levi Strauss, State Street, Toyota Motor Sales, and many more. (For agenda and registration information, go to www.cio100.com.)

Maryfran Johnson, Editor in Chief, CIO Magazine & Events
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Google’s Social Game Plan

After reflecting on the buzzkill of **Google Buzz**, Google has decided to target perhaps a **more mature audience** with **Google+**, its **Facebook-like social media destination**. Staff Writer Kristin Burnham takes us through features like **Circles**, Google’s version of Facebook lists, and **Hangouts**, where you can video chat with **up to 10 friends**. There’s also **Sparks**, a search-and-recommendation engine, and a chat room function called **Huddle**. <http://blogs.cio.com/node/16379>

Mobile Payment Perils

You may want to hold off on using new **mobile payment technology**, according to contributing writer Bill Snyder, who warns it isn’t yet as secure as using a credit card. While a special chip lets you conveniently **wave your phone at a merchant’s terminal** to make payments, phones can be **hacked as easily as computers**, and using them at certain locations could expose your PIN. Snyder adds that the **debit and credit card fees** these transactions rack up isn’t a great deal for **merchants** either. www.cio.com/article/685155

Reader Feedback

Reader Sandra Hoffman, president of Women in Technology and CIO-in-residence at Georgia Tech’s Advanced Technology Development Center, says that in our July 1 cover story, “**Disaster Hits Home**,” the message that personal leadership matters resonated with her. The article should be sent to every CEO and board chair, Hoffman says. “Often the very best of our employers are those whose personal commitment level and **depth of empathy** make them the most vulnerable to the impact of disasters.”

Compiled by Editorial Assistant Lauren Brousell. Have a comment about a story in this issue? Go to www.cio.com/issue/20110801 or write to letters@cio.com.



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FROM THE **CEO**

Cybersecurity Angst

At the beginning of this year, various industry pundits (myself included) predicted escalating threat levels from cybersecurity breaches as increasingly sophisticated hackers and cybercriminals went after big-name companies and government institutions. Given the events of the past few months, I have to say that, unfortunately, the pundits were right.

Improving market conditions have accelerated the adoption of mobile technologies, social media, cloud computing and, of course, e-commerce. All of those present juicy new opportunities for the Black Hats of the world to roll up their sleeves and work on their phishing schemes, social engineering attacks, smartphone viruses and all manner of cyber sabotage.

In just the first six months of this year, leading organizations such as Sony, RSA, NASA, PBS, the International Monetary Fund, Citigroup, Lockheed Martin and, most recently, *The Washington Post* and Apple reported security breaches.

The Pentagon has concluded that computer sabotage by another country could constitute an act of war, and President Obama calls the growing number of network cyberattacks "one of the most serious economic and national security threats our nation faces."

So when a hacker group like Lulz Security (the Sony and PBS attackers) pops up to deface an FBI affiliate website, harvest passwords and threaten NATO as its next victim, what are we to do? How do we stay prepared for the LulzSec copycats who will inevitably follow?

In a recent CIO roundtable, every executive present said that as mobile and digital strategies become essential to their business, cybersecurity has become a top concern for their company boards and CEOs.

And consider this: When Sony announced its fiscal 2010 financial results, it posted a loss of \$208 million in operating income due to the Japanese earthquake and tsunami, one of the worst natural disasters in our lifetimes. Yet Sony also lost \$171 million as a result of its Playstation Network security breach. Pretty scary how similar those amounts are.

There are no easy solutions to any of this, but taking proactive protective steps is clearly essential to the safety of your enterprise. "Analyze your defenses," the experts advise, and pay serious attention to covering the security basics.

Let's hope that next year, the pundits will get this one wrong.

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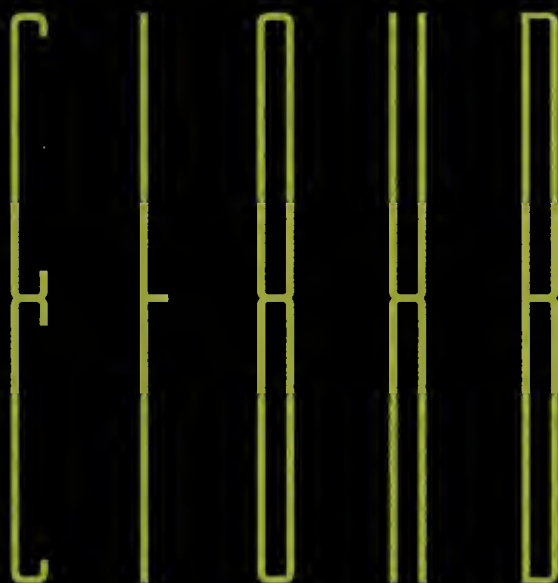
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B2B Cloud Based Collaborative Supply Management for ERP Systems

The benefits of integrating internal business applications such as financial, accounting, inventory and sales in an enterprise resource planning (ERP) system are well documented.

But ERP systems are often out of reach for resource-strapped midmarket organizations or too slow to implement for others. And enterprises are increasingly recognizing that ERP systems do little to enable information sharing with outside partners. Supply chain management processes especially suffer from this weakness. Fortunately, companies of all sizes are finding that cloud-based B2B e-commerce solutions can address these weaknesses and more.

According to the CIO MarketPulse survey *Cloud-Based Business Commerce Solutions*, the majority of organizations—52 percent of survey respondents—are open to or are aggressively pursuing cloud-based applications that can enhance their current ERP systems. The survey encompassed enterprises in both the U.S. (50 percent) and EMEA (Europe, Middle-East and Africa) (50 percent). Results, with some exceptions, were consistent across these regions. Regardless of their location, companies spend months—sometimes years—procuring, customizing and deploying systems. In spite of or perhaps because of this, organizations are turning to the cloud.

Putting business commerce solutions in the cloud gives participating trading partners access to consistent information, thereby enabling collaboration. “[The] ERP system is traditionally set up to handle processes from an internal standpoint,” says Mickey North Rizza, research director at Gartner. “Cloud apps allow you to take a piece of information you need to use with your partners out into the world where you both can see it.”

In cloud computing, services and technologies are delivered over the Internet in real-time. The supporting infrastructure is separate from the customer’s IT environment. The customer sends only the data it needs to share with partners to the cloud, where partners can access and respond to this data. When demand generation, order management, spend management and financials are integrated in the cloud,

partners and suppliers benefit from a robust e-commerce network.

Demand generation in the cloud

Demand generation in ERP systems is limited to connecting buyers and sellers for the transmission of purchase orders. Cloud-based demand generation solutions, on the other hand, provide an environment where buyers and sellers can find each other based on specific needs and offerings. A large online network of trading partners connects companies of all sizes with little to no marketing or business development funds invested. Suppliers can find new customers, and buyers can reduce risk and diversify their pool of supplier partners. In the cloud, sellers can see a 20 percent to 30 percent revenue increase year-over-year.

Order management in the cloud

ERP does order management well—within certain constraints. But when a transaction requires interaction between trading partners, as in the case with temp labor or procurement of other services, ERP’s capabilities are very limited. Furthermore, order management as addressed by ERP systems is typically thought of as a supplier-side component. A cloud-based order management solution not only enables trading partners to collaborate during the order process but also includes management capabilities that benefit both the buyer and the seller. Interestingly, the survey found that EMEA enterprises were generally ahead of their U.S. counterparts in implementing cloud-based order management.

Spend management in the cloud

ERP systems lack three elements that are critical to effective spend management: ease of use, the ability to quickly and easily enable and maintain supplier catalogs, and advanced contract compliance during the ordering process. The use of cloud-based spend management solutions goes beyond the traditional ERP users, who use the solution

every day and are comfortable with its interface. Casual users who access the solution periodically need to be able to do so with limited training. An intuitive UI plus more procurement-enabled catalogs means greater adoption and increased spend managed, resulting in more benefits. Meanwhile, contract compliance capabilities ensure that contracts are fulfilled correctly—the right products and services are delivered for the negotiated price.

Financials in the cloud

ERP systems do financial applications well—inside the organization. But processing an invoice involves collaboration between buyers and sellers, which ERP systems don't do well. For example, ERP systems do not effectively manage the electronic settlement process, such as enabling suppliers to convert electronic purchase orders into invoices, delivering detailed remittance with electronic payment, and enabling dynamic or sliding-scale early payment discounts. Cloud-based financial solutions can enable the kind of collaboration companies require to better manage their payables, days payable outstanding (DPO) and their cash, while providing suppliers with trade and receivables financing options that can improve their cash flow and days sales outstanding (DSO).

The benefits of cloud-based supply chain management

The cloud is uniquely suited to provide visibility into supply chain processes and improve collaboration in those processes. Because it is a shared environment, trading partners can come together to securely and efficiently exchange information and conduct transactions. In fact, respondents to the CIO survey who report that it is possible their organization will deploy all business commerce applications to the cloud in the next 24 months are more likely to cite improved access to resources and information among their top three perceived cloud benefits, compared to respondents not considering moving at least one business commerce application to the cloud (47 percent vs. 29 percent).

"Visibility and transparency are the main benefits that you get immediately [from cloud-based supply chain management]. The second part is lower cost. It's like a many-to-many environment. It's not a zillion serial emails

you have to read. It's everybody coming to the table at once," says North Rizza.

Cloud-based e-commerce solutions offer the following cost benefits:

- **Decreased overhead:** Trading partners spend less time finding each other, negotiating and conducting transactions. This also benefits suppliers with increased revenue.
- **Deployment and management:** Cost savings are achieved by offloading the deployment and maintenance of applications to a cloud provider.
- **Fast time-to-value:** Cloud-based solutions can be up and running before an ERP upgrade even gets out of the planning stages, enabling internal customers to work more efficiently today—not months or a year from now.
- **Pay for what you use:** Pay for only those services you use, rather than a suite of modules that you may or may not use.

Conclusion

Only the largest organizations have the resources to procure, implement and customize an ERP system. However, weaknesses in ERP systems leave huge gaps in supply chain management, which can limit business development efforts for organizations of all sizes. The development of cloud computing services changes all of that. Moving portions of the supply chain—namely demand generation, order management, spend management and financials—to the cloud enables greater visibility and collaboration amongst hundreds of thousands of trading partners. Now companies of all sizes can benefit from an integrated supply chain that improves collaboration, lowers costs while increasing profits and enhances ERP systems to provide faster time-to-value for the cloud-based application as well as the ERP system.

For more information about the Ariba Network and how your organization can benefit from cloud-based supply chain management, visit <http://www.ariba.com/go/CIOreport>.



Data Center Spending Shake-Up

Survey shows private clouds and server virtualization are driving a shift toward data centers as an operating expense

BY LAUREN BROUSELL

Cloud and virtualization are changing the way CIOs look at their data centers and, more importantly, how they spend on them.

The CIO Data Center Strategies Survey, which polled 416 CIOs, indicates that data center spending is holding steady at about 25 percent of IT budgets on average, but it will gradually shift from a capital expenditure (capex) to an operational expenditure (opex). This is suggested by the finding that CIOs think server virtualization (49 percent) and private clouds (34 percent) will have the largest impact on their data centers over the next two years. The shift toward data center spending as an operating expense will likely be a gradual one: CIOs expect opex spending to go up 7 percent over the next two years while capex spending will decrease by 5 percent.

Barr Snyderwine, CIO of Hargrove, an event and trade show company, says his core data center is currently a capital expense and accounts for around 20 percent of his IT budget. He expects it to become slightly more of an operating expense as he explores bringing some customer

websites to the cloud. His data center is becoming a higher priority. "We have more content than ever," he says.

Sixty-five percent of those surveyed agree with Snyderwine, saying their data centers will become significantly more important in the next two years. Furthermore, 52 percent of CIOs said they are very confident that they are making the right data center investment decisions to support their strategy.

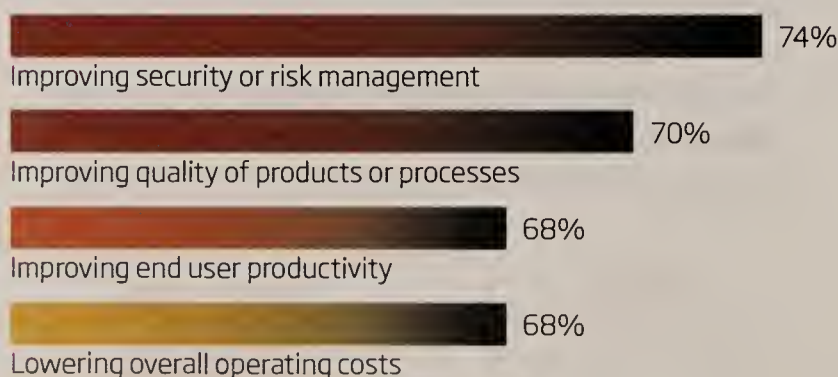
Fifty-eight percent of respondents said they operate their own data centers and 43 percent increasingly view them as a strategic asset, compared to 32 percent who see them as tactical and 20 percent who think they're transformational.

John Panicker, CIO of Texas Gulf Bank, says data centers are a popular topic at his company's management and board meetings. "The strategic plans of the organization are dynamic," he says. "And the data centers will play a wider role in the growth of the company and revenue."

Contact Editorial Assistant Lauren Brousell at lbrousell@cio.com. Follow her on Twitter: twitter.com/lbrousell.

Not Just About the Money

Security and quality concerns are the biggest business reasons to invest in data centers



Respondents could select multiple answers.

Goal Oriented

43%

of CIOs view the data center as a **strategic asset** that can help advance **organizational objectives**.

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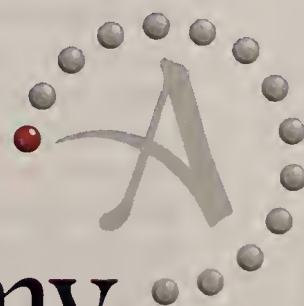
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what we're Reading

The Innovator's Manifesto

Deliberate Disruption for Transformational Growth

By Michael E. Raynor

In the search for the next big innovation, Raynor argues, being agile isn't enough. Failed experiments are a waste of money. You need a better way to determine which ideas are likely to work. That predictor, he says, is disruption. If an idea targets a relatively undesirable segment of the market, is autonomous enough to have its own business plan, and can adapt to new markets as it takes off, its odds of success—regardless of the business using it—go up significantly. *Crown Business*, \$23



Rural Broadband: Are We There Yet?

By Richard Bennett, for the Information
Technology and Innovation Foundation

RESEARCH If you think the world's going mobile fast, wait until you read this handy breakdown of the Federal Communications Commission's "2011 Broadband Competition Report." The area served by wired broadband hardly increased at all between 2009 and 2010, but use of mobile broadband, including 4G and satellite Internet, shot up. In particular, businesses should be aware that if their customers or employees live in rural areas, they may not have any devices that connect to the Internet over wires. www.itif.org/files/2011-rural-broadband.pdf

The Third Screen

Marketing to Your Customers
in a World Gone Mobile

By Chuck Martin

BOOK With the smartphone explosion and the mobile broadband trend mentioned above, by now you've surely been approached by someone from marketing who wants your help targeting customers through their always-handly cellphones. This book breaks down the psychology and habits of these mobile consumers so you can work with your CMO to decide which features are most important to build and which can be set aside for now. It'll make the marketing department feel better understood and save you the hassle of trying to deliver the world. *Nicholas Brealey Publishing*, \$28.95

@jbuford

By Jeanine Buford

BLOG Buford is the VP of IT at Keystone Human Services, a nonprofit that serves people with mental disabilities. She retweets economic, political and disaster-relief news. Sometimes she seeks advice or tosses in thoughts like, "I don't love my iPad 2. It feels heavy and awkward and entirely unnecessary. Maybe my expectations were too high." <http://twitter.com/jbuford>

Brainsteering

A Better Approach to Breakthrough Ideas

By Kevin P. Coyne and Shawn T. Coyne

BOOK The Coyne brothers, managing directors of a strategy consultancy, have found through experience and research that brainstorming just doesn't work, and that those who honestly assess the method can see its pitfalls. They advocate a process they call "brainsteering," which focuses on asking the "right" questions to unlock the creative process and arrive at breakthrough ideas. As they explain in detail, brainsteering focuses and steers participants through ideation techniques. They persuasively argue, using real-world examples, that everyone can generate great ideas if they focus on good questions rather than right answers. *Harper Business*, \$26.99

Compiled by Copy Editor Colleen Barry and IDG News Service Managing Editor Nancy Weil. To tell us what you're reading, write to letters@cio.com.

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Fujitsu recommends Windows 7.



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NEWS

Microsoft Pulls Site Due to Porn Links

Microsoft had to disable search on its Safety and Security Center, a resource for Windows users, after the results were flooded with porn links. The site was restored two days later, and Microsoft issued an apology. A source says that searches for certain terms were returning links to porn sites at or near the top of the results.

The site saves users' searches and sometimes returns old searches in the results for new searches. By repeatedly searching for key terms, spammers got their searches to show up in others' results. *Computerworld*

Digital Crystal Ball

The Intelligence Advanced Research Projects Activity (IARPA), a research arm of the intelligence community, has a new program that monitors, collects and analyzes public data to predict events. Called the Open Source Indicator Program, it's similar to Google Trends. Specifically, IARPA hopes to filter webcam streams, Twitter, Internet traffic numbers and search terms through a single pipeline.

Wired

CIOs Losing Control of IT, Survey Finds

In an increasing number of organizations, the CIO is not the person who decides what IT projects should get investment. That job now belongs to the CFO.

A recent survey by Gartner and two financial management organizations found that CFOs have authorized projects or are playing an active role in shaping IT direction in 26 percent of IT investments, an increase of as much as 15 percent from the prior year. The survey also showed that 42 percent of IT organizations report to the CFO, and 33 percent report to the CEO.

"There is a message in the study that IT needs to get much closer to business," says John Van Decker, an analyst at Gartner. "If (CIOs) don't do that, I think what you are going to see is more of the control being taken away." *Computerworld*

Groupon Changes Privacy Policy to See More Customer Info

As part of the process of going public, Groupon announced changes to its privacy policy. The company will collect more customer data to send to business partners, Groupon informed 83 million subscribers in an email that also explained the specifics of how the company collects, stores and shares customer data.

Groupon now plans to expand its categories of personal information—such as interests and habits—that it shares with its partners. It also shares contact information, relationship status, transaction details and mobile location information. Partners like Expedia can also now see what kind of coupon a user bought and whether it was for themselves or a friend.

The changes could spark a closer watch by regulators and privacy advocates. Groupon is also up against the Federal Trade Commission's Do-Not-Track initiative because the company still uses cookies, pixel tags and web beacons to track users online.

The Washington Post

U.S. Internet Providers to Take Action Against Pirates

In an effort to discourage illegal downloads, U.S. Internet providers plan to slow down network speeds or restrict access to certain websites. Companies including Verizon, Comcast, Time Warner and AT&T will give customers, up to six warnings, when their accounts show illegal downloading activities.

After giving out warnings, the providers will then slow Internet connections temporarily or redirect users to another Web page. They will not, however, completely cut off Internet access. Customers subject to these restrictions can request a review of their alleged illegal actions. *Reuters*

RIM Struggling to Launch New BlackBerry OS

BlackBerry maker Research In Motion's co-CEO told shareholders that the company is facing challenges as it moves toward what it calls its biggest product launch yet.

At RIM's annual meeting in July, Jim Balsillie discussed delays in releasing the company's new operating system. But, he said, seven new BlackBerry smartphones will run the advanced system in the coming months, enabling RIM to stay on track to meet its financial guidance for the year. *Associated Press*

Customer Backlash Against Netflix Continues

Netflix recently changed its video rental structure—eliminating its popular \$9.99-a-month plan that provided both streaming movies and DVDs by mail. The company will now offer two separate plans, one for streaming and another for DVDs. Both plans start at \$7.99.

Netflix CEO Reed Hastings has communicated his preference for streaming, saying the associated infrastructure costs are less than the postal costs of mailing DVDs.

Online outrage was swift. Customers have flooded Netflix's official blog with negative comments, many of them saying that the users plan to cancel their subscriptions.

The Wall Street Journal

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BACKUP & RECOVERY IS CHANGING: Is Your IT Team Prepared?

Backup and recovery as we know it is changing. Increasing complexity in the data center, including the rapid deployment of virtual servers, ever-expanding compliance requirements, and increasing amounts of sensitive data on mobile devices has put more strain on the process.

As such, managing data is a subject that needs to be re-evaluated and brought out of the back office to the desks of IT VPs and CIOs. A new approach to managing data, referred to as “modern data and information management,” supports further growth of strategic IT projects (such as virtualization and mobility), and can also significantly lower operating costs and improve operational efficiencies.

According to a recent CIO Market Pulse survey¹ on data protection and management, conducted on behalf of, and sponsored by, CommVault, 42 percent of CIOs describe their organization’s data management practices as “outdated,” and 31 percent describe them as “chaotic.” This comes as no surprise considering the rapid growth of data and the evolution of new technologies.

While backup and recovery vendors have been busy evolving their products to keep up with other technological developments, IT organizations have focused on staying alive in tough economic times by investing in technologies that lower operational costs and improve efficiencies. Unfortunately, outdated and chaotic data-management practices threaten these benefits.

Let’s take a closer look at how these strategic initiatives challenge outdated backup and recovery technologies:

VIRTUALIZATION

- ✓ An increase in data volume challenges storage capacity and performance management, backup and recovery, and storage provisioning.
- ✓ High server consolidation and increased data density per physical host makes it difficult to copy all the data while supporting the organization’s recovery-point and recovery-time objectives.
- ✓ Without a more efficient means of backing up virtual data, IT organizations should think twice about expanding virtualization efforts to business-critical applications.

CLOUD-BASED STORAGE

- ✓ Increasing amounts of data can be stored inexpensively, resulting in exponential data growth.
- ✓ With data accessed around the clock, IT organizations are hard pressed to back up all the data without affecting performance and availability.
- ✓ More data stored increases the organization’s liability for that data.

MOBILITY

- ✓ Increasing amounts of sensitive data are stored on mobile devices such as laptops, smartphones and tablets.
- ✓ Legacy approaches to backup and recovery fall short due to network, security, and usability constraints, and slow, resource-intensive end-user data restoration.

- ✓ IT organizations that fail to back up mobile devices risk losing valuable data, paying costly fines, and suffering damage to their reputation.

THE SOLUTION: MODERN DATA AND INFORMATION MANAGEMENT

To take the next step with virtualization, cloud computing, and mobile initiatives, CIOs need to re-evaluate their data management strategy. A modern data and information management strategy goes far beyond traditional backup and recovery. It is a tightly integrated blend of snapshot, replication and persistent copies—from physical or virtual servers—that are secure, deduplicated and accessible through a single point of entry.

The features and benefits of modern data and information management include:

- ✓ **Backup and recovery:** Automated, policy-driven snapshot-management technology for both physical and virtual environments allow companies to produce faster backups.
- ✓ **Deduplication:** Fully integrated data deduplication eliminates redundant data where bottlenecks actually occur—at the source.
- ✓ **Cloud storage integration:** Integrated alerting, reporting, and data verification functionality help ensure that data has safely reached the cloud.
- ✓ **Virtual server protection:** Auto-discovery and auto-protection capabilities ensure all virtual servers are protected.
- ✓ **Snapshot management:** By creating hardware snapshot copies internal to the storage array, high-speed recovery copies can be created with minimal impact on production servers.
- ✓ **Enterprise search:** Users can search and access data across the entire enterprise via an intuitive Web interface.
- ✓ **eDiscovery:** Comprehensive, risk-averse eDiscovery is performed through a range of information-management activities via a single console and a single infrastructure.

INTRODUCTION TO COMMVAULT® SIMPANA® SOFTWARE

CommVault® Simpana® software is a modern data management solution that offers these benefits and more. Simpana software, built on a single code base

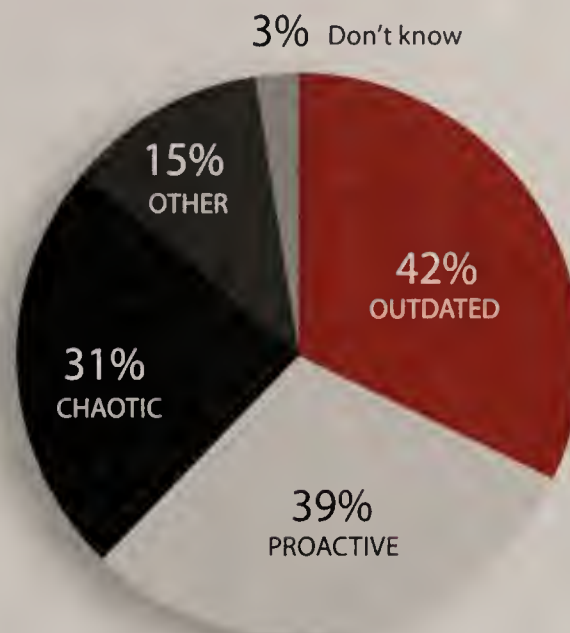


CURRENT DATA MANAGEMENT PRACTICES

42%
of CIOs describe their organization's current data management practices as outdated.

31%
describe their data management practices as chaotic.

SOURCE: CIO Market Pulse Survey, 2011



and platform, is application, operating system and disk-aware. It quickly creates copies that are highly available by integrating and leveraging hardware array-based snapshot technologies. Copies of data are deduplicated and efficiently moved to appropriate tiers of storage—whether it is disk, tape or cloud. Data can be seamlessly retrieved for multiple possible uses, including disaster recovery, data mining, eDiscovery, compliance or regulatory requirements. This end-to-end activity is what truly modern data and information management is all about.

"CommVault Simpana software is inherently different from other data protection offerings in that it's built from the ground up with a single-platform approach, which allows for unprecedented improvements in IT operations, cost savings and risk reduction," says David West, senior vice president of marketing and business development at CommVault. "We can truly help enterprises overcome broken backup processes as they look for new ways to store, access and protect their data through virtualization and cloud computing."



For more information, visit
www.cio.com/whitepapers/commvault

¹ The CIO LinkedIn Market Plus Survey was conducted among the members of the CIO LinkedIn Forum from February 23, 2011 to March 4, 2011, there were 111 respondents. This survey and all related materials were sponsored by CommVault.



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19

Social Shopping



Levi Strauss connects with Facebook so customers can shop online with friends **BY KIM S. NASH**

Levi Strauss is using social media to try to kick the blues. The private company, known for its denim jeans, has weathered the changing of its top executives and annual sales that have slid up and down like a faulty zipper. But a new social commerce strategy has won Levi millions of fans and a 2011 CIO 100 Award. The simple idea: Entice online friends to buy Levi's iconic jeans using an icon.

"We know consumers use social media sites to connect with their friends and family. And we know consumers like to get their friends' input when they shop. So we combined these ideas," said SVP and CIO Tom Peck in an email interview. "We're reaching massive numbers of consumers where they spend their time: online."

Working with Facebook developers, Levi integrated Facebook features into its Levi.com e-commerce site last year. When shoppers log in to Levi's site using their Facebook credentials, they can see which Levi's products their friends have liked, with "See It" and "Buy It" buttons next to each product picture. If none of a customer's Facebook friends have liked any Levi's jeans lately, ▶▶

.....**33%** Adults online who haven't updated their social media privacy settings. Harris Interactive**7%** U.S. doctors using videoconferencing with patients. Manhattan Research**22%** Local merchants who use Facebook ads. MetLife

►► **Shopping** Continued from Page 19

strangers' likes appear and text urges visitors to be the first among their friends to like a given product. An ad on the right side of the page shows which friends have upcoming birthdays, to help spark purchases.

Some companies, unlike Levi, still wrongly position social media as a back door way for customers to interact with them, says Kate Leggett, a senior analyst at Forrester Research. They wait, for example, until a customer tweets a complaint before engaging with him. United Airlines famously ignored a customer whose guitar the airline broke until he posted a funny song about it on YouTube, Leggett notes.

Instead, she says, companies should take the initiative to figure out how customers want to interact with them on communication channels such as social networks. Then they should roll out social technologies in a way that meets customers' needs and is aligned and integrated with the company's business processes and overall customer-service strategies.

Levi's approach is to link to its e-commerce site from its Facebook fan page. Other retailers sell on Facebook directly. For example, 1-800-Flowers opened one of the first storefronts on the social network.

Levi has proof that Facebook is important to its customers, says Peck. Facebook users visit Levi's fan page a million times a month, and 4.4 million have clicked the "Like" button—up from 180,000 in 2009. During the big shopping days after Thanksgiving last year, 50 percent of the traffic to Levi's website came from Facebook. Now, on a typical day, 30 percent comes from that domain.

Peck declines to reveal sales generated by Levi's work with Facebook, but credits the partnership with allowing it "to market and sell directly" to consumers.

Facebook is faster and more creative than some traditional enterprise IT vendors, Peck says. "They don't sit back and take years to innovate, [which] pushed us to be more nimble."

Contact Senior Editor Kim S. Nash at knosh@cio.com. Follow her on Twitter: twitter.com/knosh99.

crunch

Where the Innovators Are Whether CIOs view their IT departments as innovative varies by industry

Industries with the most...

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IT
Transportation and Logistics
Film and Media

UTILITY PROVIDERS

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Construction
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Advertising and PR

PA CONSULTING GROUP/HARVEY NASH SURVEY OF 2,500 IT LEADERS

Will Windows Phones Sell?

While Microsoft has enjoyed many successes over the past year, Windows Phone 7 hasn't been among them, admitted Microsoft CEO Steve Ballmer during the opening keynote at the 2011 Microsoft Worldwide Partner Conference, held last month in Los Angeles.

Ballmer said the company did not make major inroads into the market with its phone. "In a year, we've gone from very small to... very small," he said, referring to the market share that the phone OS has gained since its introduction last year. Survey firm Nielsen estimates that only 1 percent of handsets in the United States run Windows Phone 7.

Nonetheless, Ballmer was confident the mobile OS would have more users in the years to come. "You will see a lot of progress in the market going forward," he said.

Much of Ballmer's talk focused on the work Microsoft partners have done in the emerging field of cloud computing. The CEO repeatedly stressed the advantage Microsoft has in working with both on-premise software and cloud services. He noted technologies from competitors such as Oracle and VMware "[have] merit, but we think customers want to [mix and] match between the public and private clouds."

—Joab Jackson

•••• **80M** TVs predicted to have **Wi-Fi Direct** capability by 2015. In-Stat •••• **43%** People who prefer in-person events to virtual ones for social interactions. Virtual Edge Institute •••• **84%** Major U.S. media brands with a mobile presence. Zergo

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Vanguard Knows Your Voice

The investment firm gives customers biometric voice-recognition software to access their accounts and perform transactions **BY LAUREN BROUSELL**

SECURITY Moving money from a personal investment account can be a complex process involving trips to the bank, fees and paper forms designed to ensure compliance with regulations. And it can be full of stress, because such transactions often occur during a life milestone, such as retirement.

The Vanguard Group, which offers consumers retirement, college savings and other investment accounts, has simplified this multistep transaction process using biometric voice-verification software. The project, which earned a CIO 100 Award, lets customers access their accounts and complete transactions over the phone, using their voices as passwords. "The ultimate security measure is something you are," says Vanguard CIO Paul Heller. "Voice is actually the most secure" form of identification, he adds, because each person's voiceprint is unique.

John Marcante, an executive with Vanguard's retail services group, says transactions that once took three weeks can now be completed in three minutes. Previously, Vanguard employees would scan and verify paperwork for 96 types of transactions. That process requires a phone conversation. Now 70 percent of transactions can be completed using biometric authentication.

The system uses software from Nuance that captures individuals' vocal inflections and other details, making it more secure than a plain recording. To enroll in the service, customers call Vanguard's 800 number and record the phrase, "At Vanguard, my voice is my password." The verification system captures three voice samples and sends the customer a confirmation email. When the customer clicks on the link in the email, the service is activated. The process

takes about a minute. The service is available on mobile or landline telecommunications networks, though Vanguard hopes to offer it for VoIP calls as well.

Vanguard is rolling out the verification system to its high-net-worth customers this year and will offer it to all customers in 2012. Marcante says teamwork between IT and business leaders made the project successful. Vanguard had tested biometrics a decade ago, but the disconnect between IT, research and business leaders was too great for the project to move forward. Marcante says this time, Vanguard realized that "innovation comes from an overlap of multiple disciplines."

Contact Editorial Assistant Lauren Brousell at lbrousell@cio.com. Follow her on Twitter: twitter.com/lbrousell.

No Line at the Register

MOBILE DEVICES To alleviate long lines on crazy shopping days like Black Friday, CIO 100 winner Gap deployed the iPod Touch as a mobile point of sale (POS) system in more than 100 Old Navy stores. Using the devices, employees can ring up merchandise from anywhere in the store.

By creating an extra register when the regular ones are occupied, Gap says the iPod Touch will reduce the number of customers who abandon their purchases when lines are too long. The device connects to a store's POS system to look up merchandise and prices, conduct credit card transactions and process gift card purchases. The devices can be connected to bar code scanners to scan merchandise tags, and to wireless printers to provide receipts. **—L.B.**

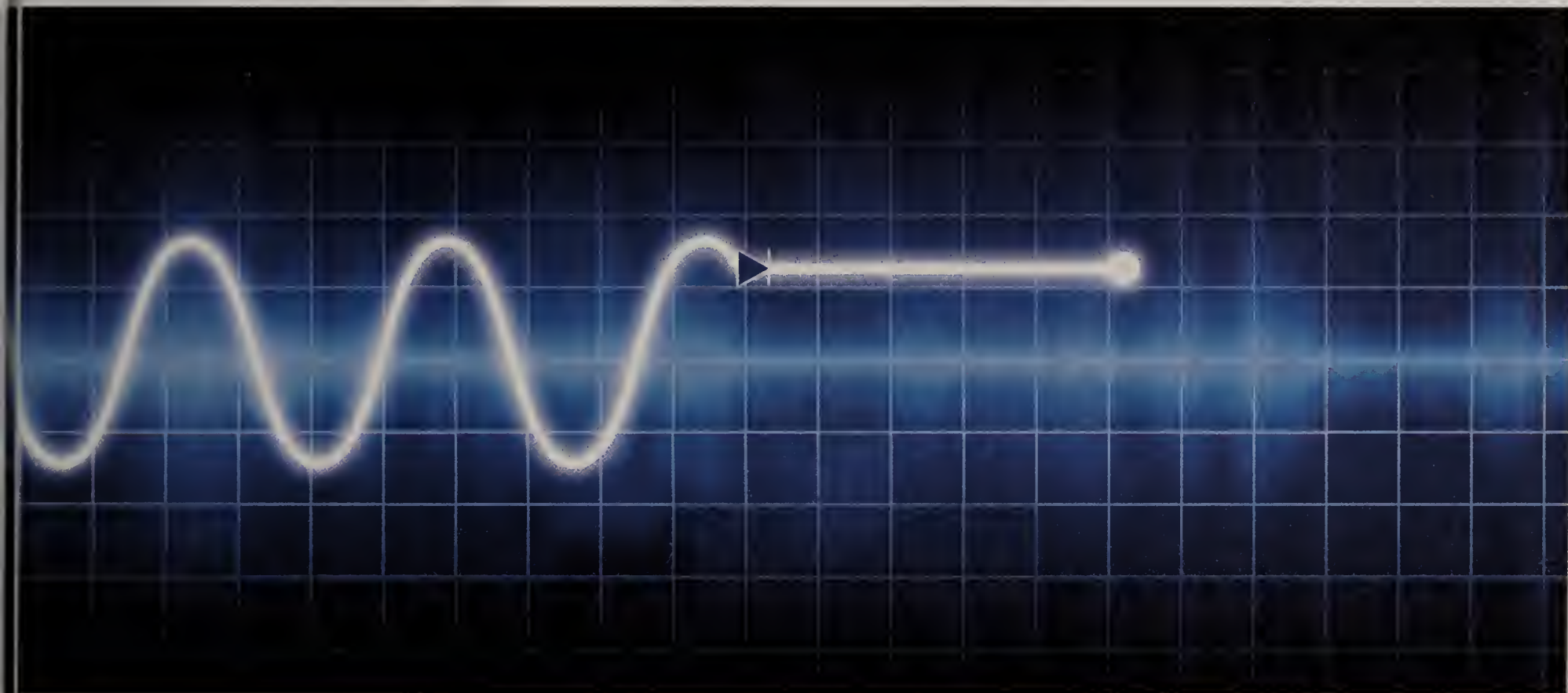
Building Smarter Condos

INFRASTRUCTURE Condominium developer Tridel, a CIO 100 winner, has a vision for the home of the future: one that runs services for residents, such as security, utility metering and telecommunications, from a building-wide IP network.

With an entire building on one network, residents can, for example, adjust their thermostats using a Web or mobile application. Internet costs can be reduced because Tridel purchases access for the building, rather than individual units. "If you look at Internet as a utility and assume everyone wants [it], the price drops dramatically," says Ted Maulucci, CIO of Tridel.

Tridel has piloted the infrastructure, including a virtual concierge service that residents will be able to access from a lobby computer screen. Using videoconferencing, residents will talk to a concierge who can help them with such needs as getting packages delivered or admitting visitors. The first condos with the new infrastructure will come to market in 2013. **—L.B.**

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VIEWPOINT



James C. Livingston

VICE PRESIDENT
COGNIZANT BUSINESS CONSULTING

James (Jimmy) Livingston joined Cognizant CBC as the Vice President in Strategic Services consulting. He developed the Future of Work readiness diagnostic, analysis and strategy framework called the Cognizant Index of Future Readiness. Using this approach, Mr. Livingston helps clients to prioritize opportunities, rapidly execute implementation plans, and build an environment to enable the Corporate Operating Model.

FOR MORE INFORMATION download the free whitepaper "The Future of Work Has Arrived" at www.cio.com/whitepapers/cognizant. You can also register for a free webinar on this topic featuring Jimmy Livingston at www.cio.com/webcasts/cognizant.



Cognizant



Focus on the Future of Work

For CIOs, a chance to transform organizations through technology.

Many IT organizations are struggling with how their companies adapt to the changing nature of work in the face of dramatic economic and technology shifts. Jimmy Livingston, vice president of consulting with Cognizant, recently discussed four major trends impacting the Future of Work and how IT is—or should be—responding.

What do you mean when you talk about the "Future of Work"?

Four forces are converging to create significant change in the way companies need to think about how they do business. Globalization, the "millennial" mindset, cloud computing and virtualization of people, process and platform are starting to profoundly reshape the market, business models, how work is conducted and how value is created.

Cognizant is a global company, so drill down on that force.

Today's knowledge globalization is creating significant opportunities on the supply side of the business. Expertise can now be accessed seamlessly, anywhere and everywhere it lives, as the costs of communication and coordination have dropped to near zero. Another key issue is how to create global processes and global products that can be customized or localized by region or geography. Companies also must deal with the fact that competitors can enter into their markets from anywhere. But that also sets up the opportunity to move into new markets, which is why having global processes and products are so critical.

Why are the millennials such a big issue?

We think about it as the millennial mindset, both digital natives and immigrants whose lives co-exist—enthusiastically—in virtual and physical worlds. And they expect their corporations and governments to do the same. Externally, it's about how you involve customers in a more collaborative, co-creation interaction model to help you develop better products and create a richer communication experience. And internally, it's about how to recruit the millennial-minded into your organization. They spend Saturday night in a very collaborative social

community, and then walk into the enterprise on a Monday morning, and it's nothing like that—they don't have access to social networks, they can't use their iPhone or iPad.

And is IT addressing these issues?

IT has focused on building systems of record—the ERP, CRM systems that are typical in a legacy environment. But IT needs to shift the investment to these newer, more collaborative and knowledge management systems of engagement. This is being driven by organizations needing to deepen the level of collaboration, and make the collaboration more meaningful—especially so that information and knowledge can be shared virtually in real time on any device, in any place, with proper context. The IT function must assess its applications, business processes and infrastructure to figure out which are the most appropriate tools and techniques to enable this deepened collaboration.

How is IT dealing with this shift?

IT is starting to realize they can't ignore this shift. It really started with virtualization of the infrastructure. Companies started separating software from the underlying hardware and we see that decoupling driving tremendous efficiencies in IT. Now we see this mass decoupling of the physical workplace into the virtual. Furthermore, standardizing and componentizing processes is enabling work to be performed by talent anywhere in the world, and delivered cost-effectively via the cloud.

What's your advice for CIOs?

The consumerization of IT places the CIO in a good place to shape this transformation to collaboration, knowledge sharing and creation of new organization models given their astute understanding of how future-facing technology can and will enable the shift. The CIO will contribute to the radical transformation to these new models and practices by empowering the organization through technology to work more efficiently, effectively and innovatively. There's a real opportunity for the CIO to be the thought leader and help usher in these new technologies and new ways of thinking.



Winning Ways to Project Success

Five CIO 100 honorees share management techniques that helped them execute their innovations **BY RICK SWANBORG**

Behind every winning CIO 100 project, there's a successful management strategy. This year's winners offer a few techniques that should be in every IT executive's bag of tricks. Here are five worth noting:

1. Hold leaders doubly accountable. Go Daddy forced team leaders to manage the contradictions of pushing an innovation agenda while engineering a solution. While building its winning one-click application- and server-provisioning project, Go Daddy assigned what it called an "innovation engineer" to lead each subteam.

Each innovation engineer coordinated both the ideas generated by the subteam and the engineering blueprints that resulted to ensure the project came together smoothly. "This made them take ownership of a very complex process, which showed bottom-line results," says Neil Warner, Go Daddy's CIO.

2. Give suppliers more attention. CIOs who manage multi-supplier environments face the vexing task of ensuring everyone plays nice. Hess outsourced its global infrastructure and an SAP application to IBM, and an accounting business process to Accenture. To support these initiatives, Hess created its winning supplier-governance model, aligning internal project managers with peer IT supplier managers.

The governance model enabled effective collaboration among Hess managers, ensuring joint ownership of a plan that addressed project scope, design, resources, issue management and schedules. Building relationships among middle managers as Hess did should become a standard industry practice, not just for getting better results but also to reduce finger-pointing if a project goes awry.

3. Make time for face-to-face meetings. Virtual teams are common, but face-to-face meetings help build good team dynamics. To roll out its winning project—smart grid technology for managing electricity usage—OGE Energy brings its team, including contractors, together every morning. Everyone stands. Each person reports what they're working on, plus any problems they've encountered

and plans to resolve them. "Except when the CEO showed up, it minimized the grandstanding and supported the right connections," says CIO Reid Nuttall.

4. Involve your stakeholders. In a diverse organization, leaders can generate momentum by creating communities that support an innovation. The General Services Administration (GSA) built its winning Data.gov site to give the public a consistent experience when accessing government information. The project brought together hundreds of employees from across the executive branch who are involved with data stewardship, publishing, open government and related activities.

These officials "are driving a cultural change at their agencies to make open government data a key aspect of what they do," said David McClure, associate administrator with the GSA Office of Citizen Services and Innovative Technologies, in an email interview. For example, the Environmental Protection Agency (EPA) published tools for accessing real-time data about the aftermath of the March 11 Japan disaster. "Having the

EPA as a partner brought those tools to the forefront for the public in a way that wouldn't have been possible before," McClure said.

5. Find quick wins. Whether your work benefits taxpayers or shareholders, you need to show results. The District of Columbia Water and Sewer Authority set out to equip its infrastructure (such as water mains) with instruments to collect data for advanced analysis. This CIO 100-winning project is helping the agency save money and water, in part by identifying equipment that needs repair.

CIO Omer Siddiqui and his team broke the project down into smaller parts that could be easily understood and that would generate value prior to the full integration. "Successfully building complex analytic solutions is an iterative process of feedback and review," says Siddiqui.

Rick Swanborg is president of ICEX and a professor at Boston University. Read more about innovative IT practices at www.icex.com.

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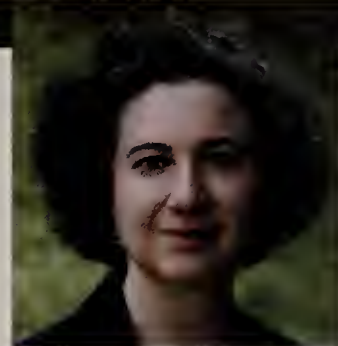
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Core Sustainability

A greener enterprise requires new tools for managing critical business processes. Three CIO 100 winners turned to IT to meet that need. **BY ELANA VARON**

To create a greener enterprise, you need the right tools. But as with any emerging area of technology, you can't necessarily pick them off the shelf. Three of this year's CIO 100 winners found ways to advance sustainability in their companies or industries by crafting new IT-enabled business practices that not only improved efficiency but also set the stage for business growth.

Modernizing the Power Grid

Electric utilities must modernize just to meet growing demand, including for alternative energy sources. "Consumer patterns of buying energy will change when they start plugging in hybrid vehicles," observes Tony Giroti, CEO of Bridge Energy Group. Utilities need data to manage electricity generation better and deliver new services to customers.

As Bridge Energy worked with utility clients to update their operations and integrate siloed systems, the company found a void. The utilities were missing enterprise architectures that could actually guide their integration efforts, whether internally or among industry partners and customers. So Bridge Energy created its CIO 100 Award-winning open Smart Grid Reference Architecture, which is being used to create a standard for the industry. "Every organization will have different tactical needs," says Giroti, but a reference architecture provides a common framework for addressing them.

A New Supply Chain

The supply chain for distributing fossil fuels is well established—and well automated. Not so for renewable fuels and supplements such as ethanol and biodiesel. "The technology and the accounting and the administrative and regulatory compliance was an absolute requirement to get that product into the fuel supply chain efficiently and economically," says Mansfield Oil CIO Douglas Haugh.

To fill the gap, the fuel-distribution company created Renewable FuelNet (RFN) a cloud-based Web service for managing the renewables supply chain. Among its other features, RFN enables buyers and sellers to make deals, track shipments and comply with regulations.

Since last year, when RFN went live, Mansfield Oil's renewable fuel volume has increased by a third. As the renewables industry expands, it will likely include many more small producers, Haugh says. "That makes being able to plug into the fuel supply chain more important for the local facility," he adds, and RFN provides Mansfield Oil with a competitive advantage.

Savings Behind the Scenes

Some consumer companies, however, may avoid certain green technologies because customers don't like them. When Leisure Sports, which develops and manages high-end fitness clubs and hotels, installed low-flow shower heads, the effort backfired. "It's forced us to look at other areas where we can save energy and not impact the guests," says Director of IT Travis Shannon.

For its CIO 100-winning project, Leisure Sports teamed with Pelican Wireless Systems to retrofit the hotel room thermostats in its Renaissance ClubSport Walnut Creek facility (which the company manages for Marriott) and integrate them with the hotel property-management system. Now, when a guest checks out, the thermostat is turned down until a new guest checks in—cutting heating and cooling costs by about 25 percent in June alone. Shannon says guests haven't noticed any change.

Companies like Leisure Sports, Mansfield Oil and Bridge Energy are leading the way with IT-enabled green business practices. What's holding your company back from doing the same?

Contact Executive Editor Elana Varon at evaron@cio.com. Follow her on Twitter: twitter.com/elanavaron.

Since Renewable FuelNet went live last year, Mansfield Oil's renewable fuel volume has increased by a third.

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— Jim Sangster
Sr. Director of Solutions Marketing at NetApp

Is your organization planning to increase its cloud footprint? If it's like most, the answer is yes. Eighty-six percent of respondents in a May 2011 IDG Research survey of CIOs and technology leaders reported having cloud computing projects either under way or in the planning stages. The survey was conducted among members of the CIO Forum on LinkedIn, which was created in 2008 by CIO magazine, and has grown to 40,000 members.

This exclusive research revealed that the clear winners were those companies with an enterprise-wide cloud strategy. Compared with companies that made decisions at the business unit or departmental level, those with an enterprise-wide strategy:

- ✓ Save more money and achieve more efficiencies with cloud services
- ✓ Already offer more IT services via cloud
- ✓ Expect to offer more services via clouds in the future

Adopting an effective cloud strategy reduces costs, serves business goals, and improves business/IT alignment. And an essential tactic in that strategy is a holistic, overarching approach that leverages expertise from the IT and business sides of the organization.

THE BENEFITS ARE CLEAR

Some of the survey's most striking results involved the 37 percent of respondents who reported having

an enterprise-wide strategy for cloud adoption, rather than managing cloud projects at the business unit or department level. Those companies saw significantly higher savings from their cloud initiatives: an average of over 60% more savings compared with those without an enterprise-wide strategy.

And the benefits didn't end there. Those with enterprise-wide strategies reported seeing greater levels of improved IT efficiency with both public and private cloud deployments. They already offer a larger portion of IT services via the cloud, and expect to offer more in the future, compared with those companies that lack an enterprise-wide plan.

Perhaps most significantly, though both companies with and without an enterprise-wide strategy reported high levels of support from top executives for their cloud initiatives, 45 percent of those that have an enterprise-wide initiative reported that their companies' top management was directly involved in creating it. That's a noteworthy statistic when you consider that executive-level "buy-in" can make or break any IT initiative.

BUSINESS AS USUAL IS NOT AN OPTION

As with any new technology, the emergence of cloud computing has presented CIOs with a host of challenges that must be met, often without widely

adopted best practices, standards and proven methodologies in place. In this early phase of adoption, gaps in implementation strategies can be identified and serve as milestones for course correction.

Such is the case with storage when it comes to cloud deployment. A study by Forrester Research, commissioned by NetApp, showed most IT organizations overlooked their storage architecture, leaving lots of efficiencies out of reach. Instead they tend to focus on the server portion of their private cloud rather than optimizing each layer of their IT infrastructure to achieve maximum efficiencies and cost benefits.

The Forrester study showed most organizations took a "business as usual" approach to their storage infrastructure, in what the researchers labeled a "red flag for cloud inefficiency." According to Jim Sangster, Sr. Director of Solutions Marketing at NetApp, "Just as consolidating and virtualizing the server environment increases IT efficiencies, the same is true for storage. The underlying storage system is a key component of any cloud architecture and can either contribute to your success or limit your options if treated as an afterthought."

PRIVATE, PUBLIC OR HYBRID?

The appeal of hosting one's own cloud is very powerful, with 65 percent of respondents reporting they plan to deploy either private or hybrid (private and public) clouds. That's a great approach—for those organizations that have the infrastructure to support it. A rational, overarching strategy pays dividends for those private cloud deployments, and sets the stage for scaled-out success in the future.

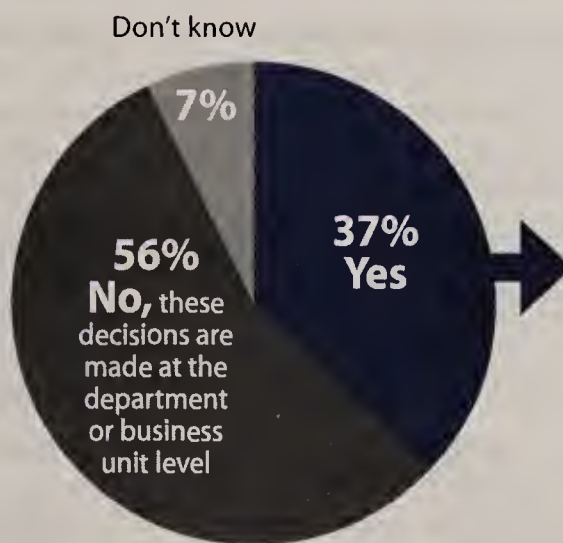
And that future is certain to include all versions of cloud implementations based on the survey results. "Our customers are interested in a comprehensive cloud computing strategy that includes both private AND public cloud models depending on their application needs" according to Sangster. "NetApp partners with leading system integrators and service providers that can offer a range of options, including hybrid clouds that offer the best of both worlds."

Within the next five years, 48 percent of respondents expect to have some form of hybrid cloud architecture, and industry observers agree that this is where most organizations are headed. That will pose management challenges for IT executives who will have to find the right balance between the two: manage the private cloud to strict SLAs, and at the same time oversee vendor relationships to ensure the continued cost-efficiency of their public cloud deployments. The only way to do this effectively is with a good overall view of the company at large, weighing business needs and priorities against the various cloud options and creating a cloud architecture that can adapt as those needs change.

Executive IT Involvement is Essential

Just over one-third of respondents have an enterprise-wide strategy for the cloud.

Enterprise-wide strategy for moving data to the cloud



Groups or individuals involved in developing enterprise-wide strategy (among those that have one)



BASE: 42 respondents whose organization has a common, enterprise-wide strategy for moving data to the cloud

If that sounds like a challenge that could benefit from the attention and support of upper management—it's likely to get just that. Eighty-five percent of all respondents report that corporate leadership is either "somewhat" or "very" supportive of cloud initiatives.

CREATE YOUR STRATEGY FOR CLOUD SUCCESS

The benefits of the cloud are "too compelling to ignore," says the NetApp-Forrester survey. With all the buzz in technology circles and the tech press, it's easy to make the mistake of thinking cloud computing is a fad that may have reached its peak. Nothing could be further from the truth. The IDG Research survey shows that, while less than a quarter of IT services are delivered by some form of cloud today, that percentage is set to shoot to 57 percent within five years. It's easy to envision a time in the not-too-distant future when the vast majority of applications, data storage and computing will take place in the cloud.

While it's still early, if you're not planning a cloud deployment, you're running behind your competitors. And if you're heading to the cloud in a piecemeal fashion, you're not setting yourself up for long-term success. Creating a forward-looking enterprise-wide strategy for cloud adoption will set you off on the right course.



Learn how NetApp can help enable your path to the cloud.
www.netapp.com/cloud

Celebrating IT Innovators



"I am honored that our high-performance computing grid...is the basis for our CIO 100 recognition"

One of the most striking characteristics of *CIO Magazine's* CIO 100 is that the award goes not to an individual CIO, but to the entire company. This is an important distinction. It underscores the notion that IT operations are not separate organizations but an integral part of the business, and organizations that understand the fundamental role IT plays in their success should be acknowledged and celebrated.

This is the 24th consecutive year that the CIO 100 winners have been selected. Chosen from almost 400 applications and judged by 40 leading industry experts, the 2011 winners represent the best use of today's IT, pioneering innovations that are transforming businesses everywhere. This year's CIO 100 proves that there has never been a more exhilarating time to be a CIO, nor a better time for IT to support business growth and drive innovation.

A quick look at this year's winners reveals an exciting diversity of thought and application of ideas. Yet those among the CIO 100 also have much in common. For the past several years, we have all operated in a challenging economic environment. In response, the IT operations we lead have had to develop creative solutions to continue to accelerate our businesses. That really is the essence of this recognition – not just the cleverness of the technology itself – but how resourcefully the technology has been used to create, deliver and increase business value for all stakeholders. In fact, this year's CIO 100 were driven by more revenue growth-oriented projects than in years past.

It also demonstrates that as the demands on IT expand, so too must the way in which CIOs define their role. The most successful and savvy CIOs no longer think of themselves merely as managers of dynamic IT operations, but as strategists who understand that technology can – and must – impel business forward.

On a personal note, as the CIO of AMD, I am honored that our high-performance computing grid, a leading-edge cloud technology that provides significant, quantifiable value to our business by speeding product time to market, is the basis for our CIO 100 recognition. Like the projects that drive the other 99 winners here, the practical application of a highly leveraged service showcases the integral contribution IT makes to AMD's success.

I want to congratulate all our fellow recipients for having your names added to the long, illustrious roster of past winners.

Sincerely,

A handwritten signature in black ink that reads "Michael A. Wolfe". The signature is fluid and cursive.

Mike Wolfe

Senior Vice President
Chief Information Officer
AMD

the Winners

The **2011 CIO 100 Awards** honor 100 companies that exemplify the strategic partnership of IT and business

ABF

Dave Cogswell, President, Data-Tronics
Judy McReynolds, President & CEO
 The logistics provider created a global supply chain management system that allows its customers to view their inventory using any warehouse-management system.

Advanced Micro Devices

Mike Wolfe, SVP & CIO
Thomas Seifert, CFO, SVP & Interim CEO
 AMD created a private cloud for its world-wide R&D design projects. Testing that used to take the chip maker's teams six months can now be performed in as few as five days.

Aflac

Bahija Noell, VP of IT Project Management
Daniel Amos, Chairman & CEO
 The insurer's Wingspan Enrollment Solutions system lets customers sign up for additional Aflac products when they sign up for core benefits, such as medical plans.

Alta Colleges

Segar Annamalai, CIO
George Burnett, CEO
 The Power of One project brings 18 colleges that had separate operations onto one platform that uses SharePoint to manage course materials and student documents.

Apollo Group

Ed Escobedo, CIO
Mike White, CTO
 An online educational platform for Apollo Group's subsidiaries, including the University of Phoenix, includes presence technology and tools that enable students to interact with the online classroom using mobile devices.

Army Contracting Command

Gino Magnifico, CIO
Jeffrey Parsons, Executive Director & CEO
 The Army created a uniform contracting system to consolidate more than 100 field offices and seven contracting centers into one platform. The agency deployed SharePoint to improve collaboration and knowledge management.

Baker Hughes

Clif Triplett, CIO
Chad Deaton, Chairman & CEO
 The provider of products and services that support oil and gas industry operations created a centralized platform for employee collaboration and remote management of customer operations. The project also created a new revenue stream.

Bayer HealthCare Pharmaceuticals USA

Duncan Lamb, VP of Business Intelligence
Mark Trudeau, President of U.S. Region & EVP of Bayer HealthCare Pharmaceuticals
 The company built a cloud-based enterprise data warehouse and analytics-delivery system that incorporates social media and collaboration technologies.

BendPak

Sina Moatamed, CIO
Don Henthorn, President & Owner
 The automotive service equipment maker's Direct Shipment project lets contract manufacturers produce complete products and ship them directly to distributors. The changes reduced manufacturing costs and increased sales. (BendPak eliminated its CIO position in April, and the CIO left the company.)

BMO Financial Group

Jean-Michel Arès, Group Head of Technology and Operations
William Downe, President & CEO
 A unified global commercial online banking system allows business banking customers to access their financial data in an easy-to-use format. With all its customers using the same platform, it's easier for BMO to identify upselling or cross-selling opportunities.

BNY Mellon

John Fiore, EVP & CIO
Robert P. Kelly, Chairman & CEO
 BNY Mellon created an internal social networking platform. The system has encouraged brainstorming among people with shared business interests.

Bridge Energy Group

Mandakini Pahooja, VP of R&D
Tony Giroti, Chairman & CEO
 As a result of a Department of Energy effort to modernize the nation's electrical grid, Bridge Energy Group developed an open Smart Grid Reference Architecture to ensure the integration of and operation between existing legacy power grids.

CallPlus Services

Adrian Dick, CTO
Mark Callander, CEO
 CallPlus developed Nostro, a system for multi-dimensional analysis of business intelligence data. One of Nostro's benefits is that it lets CallPlus identify customers that cost the company money or are otherwise underperforming, and do it faster, by identifying trends.

Capital One Financial

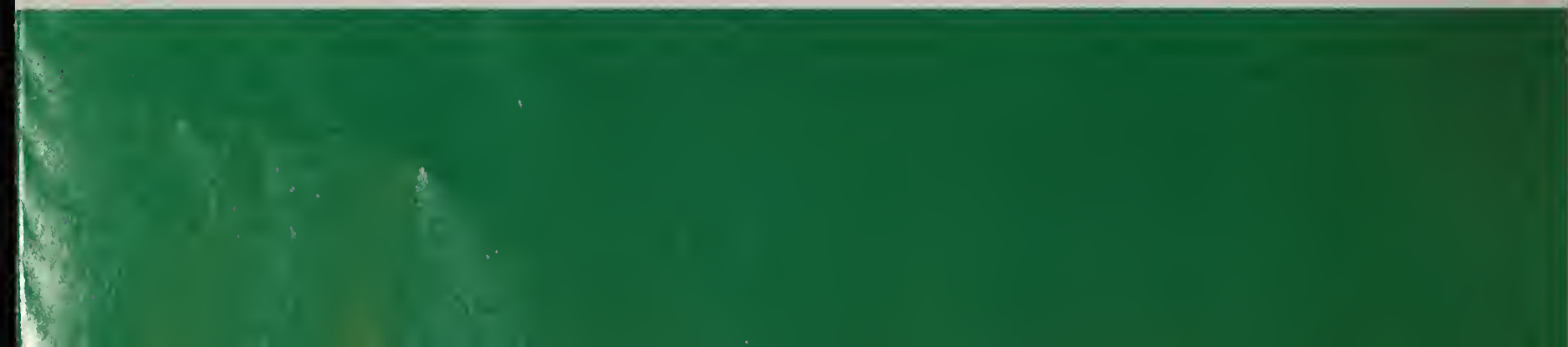
Rob Alexander, CIO
Richard D. Fairbank, Founder, Chairman & CEO
 The financial services company consolidated its data-warehouse, reporting and analytical tools, extending a successful program from its credit card division to other lines of business. The company says this enterprise standard will ease future acquisitions, among other capabilities.

Celestica

Mary Gendron, SVP & CIO
Craig Muhlhauser, President & CEO
 The design, engineering, manufacturing and supply-chain services company created an open-source system to control manufacturing processes at sites around the world. Among its benefits: Engineering change requests that were recorded centrally are now handled locally.

Chartis

Peter Beyda, SVP & CIO
Peter D. Hancock, CEO
 Claims Navigator automates simple insurance claims decisions and accelerates more complex ones with workflow and decision-support tools.

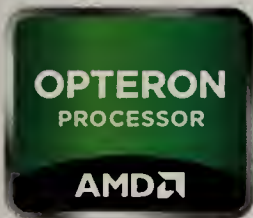


Beats the

*"my forecast calls for more clouds,
and more clouds call for more cores"*

benchmark.

The moment you realize how more cores are better for your cloud is the moment you understand the core advantage of an AMD Opteron™ processor. With up to 100% more cores¹ than our competitor, AMD Opteron processors can quickly scale up to handle some serious workloads so you can expand your business quickly. And with performance-per-watt that's exceptional,



the savings just might beat your predictions. The power of more cores. It's just one of the many core differences of AMD Opteron processors.

Get to the core of cloud computing for your business.
amd.com/cloudcio

¹ Comparison of AMD Opteron™ 6100 Series Processor with 12 cores versus Intel® Xeon® processor X7560 (8 cores) or Intel® Xeon® processor E7540 (6 cores). Trademark attribution: AMD, the AMD arrow logo, AMD Opteron and combinations thereof are trademarks of Advanced Micro Devices, Inc.

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Chicago Public Schools**Arshele Stevens**, CIO**Jean-Claude Brizard**, CEO

A districtwide videoconferencing system allows teachers and administrators to cost-effectively receive updates, training and professional development through online webinars, as well as to expand student learning and provide access to special events.

City of Brampton, Ontario**Robert Meikle**, CIO**Susan Fennell**, Mayor

This Canadian city deployed a Web-based platform for delivering citizen services. It includes a secure repository that enables government employees to publish content more efficiently and deliver new services, such as a mapping application that lets citizens get detailed information about city locations.

Con-way**Richard Carroll**, VP of Enterprise IT**Douglas W. Stotlar**, President & CEO

The freight, transportation and logistics services company deployed ruggedized handheld computers at its 290 service centers. Users can record shipment events in near real time, eliminate phoned progress reports and get more shipments to the right loading dock the first time.

Cross Country**Automotive Services****Mark Carbrey**, CIO**Michael Saxton**, President & CEO

The company developed its Third Generation Connected Vehicle Platform as a way for automotive OEMs to deliver advanced telematics services through multiple channels, including mobile devices.

Defense Information**Systems Agency****David Mihelcic**, CTO**Carroll F. Pollett**, Lieutenant General

The agency developed a system to enable the Department of Defense to collaborate and share nonclassified information with other government agencies, friendly nations and other partners. It became the primary nonclassified system used by the U.S. military in its response to the January 2010 Haiti earthquake.

Dell**Robin Johnson**, Global CIO**Michael Dell**, CEO

The Auto Part Selection tool automated a search process that, when conducted manually, sometimes led Dell to ship the wrong part for its built-to-order computers.

Discover Financial Services**Glenn Schneider**, SVP & CIO**David W. Nelms**, Chairman & CEO

The company's Rapid Development Data Sourcing initiative used a hybrid of traditional and agile techniques to speed up the delivery of data for making business decisions.

District of Columbia Water and Sewer Authority**Omer Siddiqui**, CIO**George Hawkins**, General Manager

The Analytics Driven Asset Management system provides advanced and predictive analytics, helping the agency dispatch work crews more efficiently, detect infrastructure problems earlier and cut wasteful leaks.

Dow Chemical**Dave Kepler**, SVP of Shared Services, Environment, Health and Safety, & CIO**Andrew Liveris**, Chairman & CEO

The Combined Reporting system pulls data from multiple ERP systems and other sources to provide a consolidated view of reports, sales figures and other information, helping to create consistency across Dow's global business operations.

DreamWorks Animation SKG**Ed Leonard**, CTO**Jeffrey Katzenberg**, CEO

The movie studio transformed a siloed computing environment into a converged infrastructure using Hewlett-Packard servers, storage and network switches. It also employed infrastructure as a service to boost its offsite graphics-rendering capacity.

Eaton**William Blausey**, SVP & CIO**Alexander M. Cutler**, Chairman & CEO

Tools created for the Pulse project show inefficiencies in plant operations through the visual display of inventory flow, work-order flow, shipments and other measures, and they monitor input metrics—rather than output metrics such as sales—to analyze how well a plant is running.

Emerson Electric**Kathleen McElligott**, CIO**David Farr**, Chairman & CEO

Emerson's Rigid 360 CRM tool lets sales representatives use their mobile devices instead of wrestling with laptops. The quality of customer data has improved, sales have increased, and the company has cut costs by reducing the need for laptops.

Essar Steel**Suneel Aradhye**, CIO**Malay Mukherjee**, CEO

Essar Steel developed a global business-process template to enable a companywide rollout of SAP. The company has eliminated paper-based planning, implemented real-time production scheduling and increased performance through the use of standardized reports.

Ethiopia Commodity Exchange**Solomon Edossa**, CIO**Eleni Gabre-Madhin**, CEO

A fully automated electronic trading platform for agriculture accommodates Ethiopia's lack of a reliable communications and power infrastructure. Multilayered failover solutions support dial-up connections from rural warehouses over old, poorly insulated copper wires.

Eurpac Information Services**Mike Skinner**, CIO**Jed Becker**, President

Fresh Reach improved delivery of consumer products to troops in Afghanistan by providing a daily forecast of demand, improving collaboration between suppliers and manufacturers, and using mobile applications to speed up audits and surveys of shipments at various distribution points in Europe.

Fairfax County Public Schools**Maribeth Luftglass**, CIO & Assistant Superintendent**Jack D. Dale**, Division Superintendent

The electronic Curriculum Assessment Resource Tool provides a repository for all curriculum and test content. It includes a Web-based learning portal, a student assessment application and a decision-support library through which educators track student development.

FedEx Freight**Rebecca McClendon**, SVP of IT**William J. Logue**, President & CEO

Through Project Advance, FedEx combined three entities into one nationwide pickup and delivery network. Wireless technologies and a redesigned internal system provide automated routing decisions and track multiple shipments in near real time. FedEx employees can now pick up and drop off both priority and economy shipments at the same locations.

Fifth Third Bancorp**Joseph R. Robinson**, EVP & CIO**Kevin T. Kabat**, President & CEO

The bank's Enterprise Customer Information File centralizes customer data, eliminating duplicate customer files, improving data accuracy and helping to increase revenues through more focused sales and marketing efforts.

Foley & Lardner

Doug Caddell, CIO

Jay Rothman, Chairman & CEO

The global law firm is giving employees allowances to buy their own technology from an approved list of laptops, netbooks, smartphones, tablets and wireless services.

Gap

Tom Keiser, EVP & CIO

Glenn Murphy, Chairman & CEO

The Mobile POS system allows sales staff to use iPod Touch devices to complete transactions anywhere in the store via secure wireless connections.

GE Energy

John Seral, VP & CIO

Brian Palmer, VP & CEO

The company's Measurement & Control Solutions group deployed a business intelligence system to deliver real-time access to information to employees at multiple locations. The project has automated access to data, which can be delivered on mobile devices, improving efficiency.

Go Daddy Group

Neil Warner, CIO

Bob Parsons, Founder & CEO

The domain name registration and Web hosting company's One Click Provisioning system automates the process of building Web hosting servers, allowing employees to work on growth-oriented projects.

Goodwin Procter

Peter Lane, CIO

Regina Pisa, Chairman & Managing Partner

The international law firm launched Founder's Workbench to support entrepreneur clients with access to critical forms, best practices and other resources. The site, based on the WordPress content-management platform, can provide all the information and documents needed by startup technology firms.

Graham Group

Kim Johnson, CIO

William B. Flaig, President & CEO

The construction and contractor-management firm created Graham Toolbox, a platform that delivers applications for proposal creation, procurement, project management, scheduling and safety systems, among others, using a cloud infrastructure. It has helped to standardize operations, improving collaboration with partners and vendors and enabling the company to take on larger projects.

H&R Block

Rich Agar, CIO

William C. Cobb, President, CEO & Director

The company made provisioning end users easier by moving to a virtualized desktop infrastructure. Thin-client devices do not need to be set up by an IT technician; an employee can plug one in and it is then remotely configured.

Hallmark Services

Neal Kaderabek, Executive Director & CIO

Susan Yeazel, VP of Consumer Markets

The provider of administrative services for health insurance companies simplified the insurance application process to accommodate expected growth. In addition, the company deployed a new underwriting system that learns from previous underwriting decisions—an industry first that frees underwriters to spend more time on complex cases, according to Hallmark.

HDFC Standard Life Insurance

Thomson Thomas, VP of IT

Amitabh Chaudhry, CEO

The Workflow on Demand and Enterprise Retrieval System (Wonders) standardizes key management processes for the Mumbai-based life insurance company, tracks productivity and enables information sharing. Wonders helped HDFC reduce the time for issuing a policy and decreased errors as application volume quadrupled.

HealthSouth

Rusty Yeager, Interim CIO

Jay Grinney, President & CEO

The healthcare provider created Beacon, a management reporting system, to track labor productivity, therapy and care outcomes, supply-chain expenses and its workforce, allowing it to monitor regulatory compliance and performance of its hospital operations.

Hess

Jeffrey Steinhorn, VP & CIO

John Hess, Chairman & CEO

The energy company outsourced several aspects of its Marketing and Refining business to partners: IBM manages its global infrastructure operations and SAP application services, and Accenture manages its accounting functions. To reduce complexity and allow the partners to interoperate successfully, Hess created a multipartner governance model to normalize decision-making processes involving its applications, SharePoint sites and departmental storage sites.

Informatica

Tony Young, CIO

Sohaib Abbasi, CEO

The software and services provider launched its own software store in much the same vein as online code marketplaces such as Apple's App Store and Salesforce.com's Force.com. The Informatica Marketplace is an open forum that allows developers to buy and sell software that extends the functionality of Informatica's platform.

ING Direct USA

Rudy Wolfs, CIO

Arkadi Kuhlmann, Chairman, President & CEO

In an effort to prevent fraud and minimize its vulnerability to attack, financial institution ING Direct deployed a system to analyze Web traffic across all its properties and detect potential threats earlier. The company can see attempts to compromise its network and identify whether the attacks are random or represent a more persistent threat.

Ingersoll-Rand, Industrial Technologies Sector

Archana Deskus, VP & CIO

Robert Zafari, President of Industrial Technologies

This division of manufacturer Ingersoll-Rand consolidated five data sources from 33 domestic locations into a homogenous business intelligence platform. Much of the project's success is due to a tightly managed development process. Managers now spend more time analyzing the data and less time trying to retrieve the data from far-flung systems, which saves millions of dollars in productivity.

Ingram Micro

Mario Leone, EVP & CIO

Gregory M. Spierkel, CEO

The technology distributor created the Ingram Micro Cloud, a business and educational resource that allows its partners to select cloud solutions to meet their needs.

Intel

Diane Bryant, VP & CIO

Paul S. Otellini, President & CEO

Intel created a private cloud to provide on-demand infrastructure for its business units around the world. Built-in business intelligence allows the company to see which projects and internal units use which resources and to allocate capacity according to business priorities.

International Business Machines

Jeanette Horan, VP & CIO

Samuel J. Palmisano, Chairman, President & CEO

To support its mobile workers, IBM created Whirl-Wind, an online store for delivering corporate smartphone applications to its employees. The store lets the IBM workforce propose, vet and deliver hundreds of mobile apps in a secure environment using a specially created mobile client.

Judicial Branch of Arizona, Maricopa County

John Barrett, CIO

Norman J. Davis, Presiding Judge

The agency deployed its Fines/Fees and Restitution Enforcement (FARE) program to improve collections of court-ordered payments. It includes a Web-based system that makes it easier for individuals to submit payments, and the courts and various government agencies can now share case and financial data more easily.

K&L Gates

Steven W. Agnoli, CIO

Peter J. Kalis, Chairman & Global Managing Partner

The global law firm deployed server, desktop and application virtualization to bring new offices and employees on board quickly and cost effectively. Now, all that's needed to get a new office fully functional is a working Internet connection.

Kohlberg Kravis Roberts

Edward Brandman, CIO

Henry R. Kravis, Co-Founder & Co-CEO

The private equity company built its Private Equity Portfolio Company Reporting System to provide monthly views into comparative data across companies and industries, replacing a process that was manual and relied heavily on Excel spreadsheets. The system has enabled the company to increase the number of companies it owns without increasing staff to support additional financial reporting activities.

Lehigh Valley Health Network

Harry Lukens, CIO & SVP of Information Services

Ronald Swinford, President & CEO

Teleburn helps specialists determine whether burn patients should be transferred to the healthcare group's Regional Burn Center from other facilities. The platform delivers burn images directly to specialists' smartphones, resulting in better patient outcomes and better use of specialist resources.

Leisure Sports

Travis Shannon, Director of IT

Steve Gilmour, President & CEO

The manager of hotels and fitness facilities deployed wireless thermostats in the rooms at its Renaissance ClubSport Walnut Creek hotel and integrated them with its property-management system. The thermostats can detect whether a room is unoccupied or if a guest has checked in and adjusts temperature settings accordingly.

Levi Strauss

Tom Peck, SVP & CIO

John Anderson, President & CEO

The company embraced social commerce by integrating the Facebook "Like" button into its Levi's e-commerce site, launching the interactive Dockers Wear the Pants campaign, creating a virtual fitting room and an online social forum for its Curve ID women's jeans, and opening the Levi's Friends Store, which the company describes as the first social online shopping experience.

Life Technologies

Joe Beery, CIO

Gregory Lucier, Chairman & CEO

The global biotech firm rolled out an analytics dashboard that delivers critical business intelligence to management and sales staff on their iPhones and iPads. By switching to the mobile devices—which meant they no longer had to boot up laptops—employees saved time and improved productivity.

Mansfield Oil

Douglas S. Haugh, EVP & CIO

Michael F. Mansfield Sr., CEO

The fuel distributor deployed a cloud-based Web service to integrate renewable fuels into the North American fuel-supply chain, making the market transparent to buyers and sellers and eliminating much of the effort of tracking, administering and reporting transactions.

Marcus & Millichap Real Estate Investment Services

Richard H. Peltz, SVP & CIO

John J. Kerin, President & CEO

The real estate investment service firm created dynamic Web pages for its sales agents, along with iPhone and iPad applications and a social media campaign. The project helped increase sales volume and improve lead generation, among other benefits.

Marriott International

Bruce Hoffmeister, Global CIO

Robert J. McCarthy, Group President

Marriott launched its Autograph Collection boutique hotel brand in record time by leveraging its existing application portfolio and service-oriented architecture. The improvements to Marriott's platform that allowed the project to succeed will also allow the company to quickly and cost-effectively integrate other new hotels and brands in the future.

McCoy's Building Supply

Dennis Strong, SVP & CIO

Brian McCoy, President & CEO

The company gave selected contractors their own pages on the McCoy website, allowing customers to find contractors in the area, and helping contractors generate leads. Contractors who used to do business with McCoy have returned in order to be part of this network.

Melco Crown Entertainment

Roger Seshadri, SVP & CIO

Lawrence Ho, CEO

The company, which owns resort casinos in Macau, created a virtual private cloud—virtualizing servers, desktops and storage, as well as consolidating multiple call centers and integrating them with CRM software for telemarketing. With this new infrastructure, the company can now provide voice, data, wireless and IT services to third-party operators such as Hyatt Hotels.

Miller Johnson

Erik Goltzer, CIO

Craig Mutch, Managing Member

The law firm deployed a SharePoint-based enterprise-content-management system companywide, increasing efficiency, reducing risk and increasing revenues. Benefits include faster reporting and expansion of the firm's client base.

Monsanto

Shirley Cunningham, CIO

Hugh Grant, Chairman, President & CEO

The company consolidated data analysis for all of its brands, enabling sales teams to point out products' performance advantages to customers.

Nationwide Investment Services

Michael Keller, EVP & CIO

Stephen S. Rasmussen, CEO

The insurer consolidated customer information into one system, deploying advanced analytics and other capabilities to its distribution channels. When customers initiate, then abandon, the process of generating an online quote for insurance, that information is captured and forwarded to teams who help customers complete the quote and sign up for a policy.

NBC News

Michael Fabiano, VP of Strategic Initiatives

Steve Capus, President

NBC launched a website that allows customers to search and view footage, clip and purchase video content online by credit card, and download the content in a variety of formats. Previously, sales of this footage were handled manually. As a result of the new site, the cost of delivering content to customers has been reduced.

NetApp

Marina Levinson, SVP & CIO

Tom Georgens, President & CEO

The storage company automated its field service process globally using Web services and email forms to exchange data with partners. The system helps NetApp ensure that the arrival of parts for customer equipment is coordinated with the time at which its engineers are scheduled to service that equipment.

Network Services

Paul Roche, CIO

Robert Mitchum, President & CEO

The supply chain services cooperative replaced three legacy ERP systems with a single instance of the SAP Agency Business solution, integrating it with dozens of member companies' back-end systems.

OGE Energy

Reid V. Nuttall, VP & CIO

Peter B. Delaney, Chairman & CEO

As it rolls out SmartGrid technology, the utility has deployed a communications backbone, wireless access points and smart meters. With its smart meter infrastructure, OGE can now perform frequent automated meter readings, disconnect and reconnect electricity as needed, and communicate with customers electronically.

OhioHealth**Michael Krouse**, System VP & CIO**David P. Blom**, President & CEO

OhioHealth created the Stroke Network, a telemedicine system that connects physicians in remote hospitals directly to critical care nurses in Columbus, Ohio. Nurses can promptly and accurately assess patients with stroke symptoms, then contact a neurologist who can interact virtually with the local team to see the patient, review lab and imaging tests, and recommend treatment.

Old Dominion Freight Line**Ken Erdner**, VP of IT**David Congdon**, CEO

The logistics company created its On Board Computer system to monitor and measure drivers' usage of tractors for improved safety, smoother operations, proactive maintenance and greater fuel efficiency. The system collects engine data such as idle time, mileage and speed, and it can record sudden starts and stops, indicating speed and location if a vehicle is in an accident.

Ontario County, New York**Sean Barry**, CIO**Geoffrey Astles**, County Administrator

Ontario County developed a fiber-optic telecommunications infrastructure that connects public agencies, schools, hospitals and businesses across the county in order to provide more reliable and affordable Internet connectivity and services for citizens. County officials say the project also encourages economic development.

Owens & Minor**Rick Mears**, SVP & CIO**Craig Smith**, CEO & President

Owens & Minor migrated its legacy ERP system to a Microsoft Windows Server environment, thereby preserving its unique business processes and rules. The project has reduced operating expenses, enabled Web-based customer self-service capabilities, and transformed individual applications into reusable Web services.

Pfizer**Jeffery Keisling**, SVP & CIO**Ian Read**, CEO

The pharmaceutical company designed and implemented eCard, a loyalty program that patients in emerging markets can use to get access to Pfizer medications while earning discounts and free goods. Pfizer partners with government agencies to distribute the cards to patients through healthcare providers. Patients present the magnetic stripe cards to pharmacists to receive discounts and provide usage data to doctors and to Pfizer.

PNC Financial Services Group**Anuj Dhandra**, CIO**James E. Rohr**, Chairman & CEO

PNC designed and deployed a patent-pending data-modeling and simulation tool to plan the migration of millions of customer records PNC inherited in its acquisition of National City. The tool used simulation to predict the impact of the migration on customers and to flag accounts at risk of not transferring properly.

PPG Industries**Werner Baer**, VP of IT**Charles Bunch**, Chairman & CEO

PPG Industries developed its Digital Color Platform to let retailers sell paint products via a desktop application, website or mobile application. The patent-pending platform allows customers to match paint to any color they view on their monitor—for example, a hue from a favorite movie scene—display this color in a room scene, share it with family and friends through social media, order paint samples, calculate the amount of paint required, and purchase the product.

Presbyterian Intercommunity Hospital**Brian Smolskis**, CIO**James West**, President & CEO

The hospital designed and developed its Bed Request System to improve patient flow and enhance communication between its emergency department and its access department, which handles the placement of patients who are admitted for treatment.

Procter & Gamble**Filippo Passerini**, President of Global

Business Services & CIO

Robert McDonald, CEO

The company's Global Business Services Solutions Space helps demonstrate new ideas to top management, business leaders and external partners by using video projection and telepresence to provide immersive environments.

Reliant Energy Retail Holdings**Steve Wilburn**, SVP of IT**Jason Few**, President

The utility emails its customers weekly with previously unavailable, personalized electricity usage and cost information. The messages include information about a customer's projected usage, weekly cost comparisons, a visual depiction of electricity usage patterns, and energy and conservation tips.

Restaurant Technologies**Randy Witt**, Director of IT**Jeffrey Kiesel**, CEO

The Total Operations Management system provides Restaurant Technologies' clients with real-time information to manage their food-service operations, in particular their cooking oil usage. By tracking oil inventory, temperature, and fry cycle counts, the company can send delivery vehicles to customers' locations only when oil is needed, thereby lowering labor costs, reducing vehicle maintenance fees, saving fuel and decreasing distribution costs.

Rivet Software**Philip Winterburn**, CIO**Patrick Quinlan**, CEO

The company's compliance services workflow system accommodates an explosive increase in demand for its eXtensible Business Reporting Language filing services. Rivet's teams can now see the work in process for each filing, view necessary actions, and know which filing is due on what day, enabling it to reach its estimated filing time frames nearly all the time.

Safelite Group**Craig Douglas**, VP & CIO**Tom Feeney**, President & CEO

SafeGear, a mobile application, enhances and expedites the scheduling of work orders for the vehicle glass repair and replacement service. Technicians equipped with BlackBerrys use SafeGear to clock in, receive daily work-order notifications with real-time updates, receive driving directions, electronically capture customers' signatures, receive images of pre-inspection damage, and process credit card transactions.

Sprint Nextel**Peter Campbell**, SVP of IT**Dan Hesse**, CEO

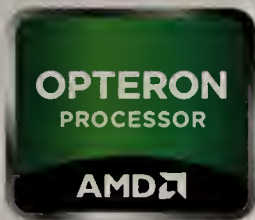
Sprint Nextel created a Web-based integrated service-management system to increase the quality and delivery speed of its IT services. The system creates a unified view of IT systems, integrating data from several sources and generating reports on system effectiveness. IT problems receive an automatic service-desk ticket, which can be used to track and audit IT response to issues, ensuring that Sprint IT is meeting service-level agreements.

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¹ Comparison of AMD Opteron™ 6100 Series Processor with 12 cores versus Intel® Xeon® processor X7560 (8 cores) or Intel® Xeon® processor E7540 (6 cores). Trademark attribution: AMD, the AMD arrow logo, AMD Opteron and combinations thereof are trademarks of Advanced Micro Devices, Inc.

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The AMD logo, consisting of the letters "AMD" in a bold, sans-serif font, followed by a stylized white arrow pointing to the right. The logo is set against a dark green background.

S&P Indices**Bala Subramanian**, CTO

Louis Eccleston, Executive Managing Director & President
The Global Real-Time Index Platform (GRIP) helps the company, part of Standard & Poor's, support its growing business. GRIP's features include the ability to source and integrate real-time market information from vendors and stock exchanges, and to quickly calculate and disseminate indices.

State Street**Chris Perretta**, SVP & CIO

Joseph Hooley, Chairman, President & CEO
The financial services company developed a regional data center solution to support its strategy of rapid change and growth through acquisitions.

Symantec**David Thompson**, Group President & CIO**Enrique Salem**, President & CEO

SymDemo—a secure, cloud-enabled, virtual demo center—replaces the majority of the software vendor's physical demo equipment. Sales engineers can access product demos running in the cloud, while the IT team can easily create tailored demos.

Teva Pharmaceuticals, USA**Jimmy Wang**, VP & CIO**Shlomo Yanai**, President & CEO

The ePedigree Serialization system uses RFID to track Teva's products through the supply chain. The system allows Teva to comply with FDA requirements that pharmaceutical companies provide a validated chain of custody for drug products. It also helps to execute chargebacks, rebates and pricing for Medicare and Medicaid patients, and it improves visibility for better forecasting and product recalls.

Texas Children's Hospital**Myra Davis**, VP of Information Services**Mark Wallace**, President & CEO

The hospital integrated iPhones with its wireless infrastructure to streamline internal communications. Messages are routed to the most relevant employees, prioritized according to urgency.

Town of Castle Rock, Colo.**Kevin Capp**, CTO**Mark Stevens**, Town Manager

The town deployed software from Autodesk, among other tools, to streamline the process for reviewing proposed building projects. It also created an online map, providing residents with a view of projects breaking ground in open fields behind their homes.

Toyota Motor Sales, USA**Zack Hicks**, VP & CIO**Jim Lentz**, President & COO

Following its highly publicized automobile recalls, Toyota developed the Vehicle Life-cycle Analytics Application to provide business users with the ability to analyze large volumes of quality-related data. The application combines information from multiple public and internal data sources to enable ad hoc analysis of relevant information by quality analysts and engineers.

Tridel**Ted Maulucci**, CIO**Angelo DelZotto**, Chairman and CEO

The condominium developer has created a new method of design and construction that enables it to deploy a single fiber optic network to support multiple building systems that were previously wired separately. The system puts security, metering, thermostats, Internet, telephony and television all on the same network and creates opportunities for multi-family communities to purchase Internet-based services in bulk.

U.S. General Services**Administration Office of****Citizen Services and Innovative Technologies****Casey Coleman**, CIO

David L. McClure, Associate Administrator
GSA's Data.gov website is a central online repository for federal government data, including 300,000 data sets and hundreds of citizen- and government-developed applications.

U.S. Marine Corps**Brig. Gen. Kevin Nally**, Director, C4 & CIO**Gen. James F. Amos**, Commandant

The Marines modernized its logistics chain, deploying a federated private cloud designed to handle force deployments in rugged conditions. In the past, logistics specialists in the rear echelon could not peer into the readiness of units leading an operation. Now they have a single source of information, optimized processes, reduced administrative work and improved logistics time.

United States Tennis Association**Larry Bonfante**, CIO**Gordon A. Smith**, Executive Director & COO

The United States Tennis Association deployed several systems that have helped it create new revenue streams and enhance existing ones. One of these is an event-management system, called Command Center, that it is marketing and licensing to other professional sporting event organizers and venues.

Vail Resorts**Robert Urwiler**, SVP & CIO**Robert Katz**, Chairman & CEO

Vail Resorts has combined social media, location-based services, personal performance tracking and RFID to create EpicMix, an application that allows skiers and snowboarders at its resorts to capture and share their achievements with friends and family.

Vanguard Group**Paul Heller**, Managing Director of IT**William McNabb**, Chairman, President & CEO

The mutual fund company is rolling out a biometric voice-verification system, which allows customers to use their voice as their password. The system permits customers to conduct over the phone transactions that previously required special paperwork.

Volunteers of America**Chesapeake****Shyam Desigan**, CIO & CFO**Russell K. Snyder**, CEO

The nonprofit, which provides social support services, is using cloud computing to manage its financial records. Geographically dispersed employees have secure and structured access to documents from anywhere, at any time, enabling collaboration and helping the group prevent revenue losses.

Wells Fargo**Avid Modjtabai**, EVP of Technology and Operations**John G. Stumpf**, Chairman, President & CEO

The bank's ATM e-receipt option gives online banking customers who use ATMs the choice to send an electronic receipt to either their online banking inbox or a personal email account. The electronic receipts increase security by eliminating the risk of a paper receipt being lost or viewed by others.

Yale-New Haven Hospital**Daniel Barchi**, SVP & CIO**Marna Borgstrom**, President & CEO

The Clinical Rounding program is a new approach to help-desk support. IT staff make rounds three times a day to check on clinical equipment, fix any problems and sanitize frequently handled hardware. IT also installed RFID call buttons in clinical areas so nurses and medical staff can summon technicians.



Learn more about each company and its winning project at www.cio.com/cio100/2011/1



Beats the

*"more cores mean more VMs,
and a more scalable business"*

benchmark.

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**More cores. More scalability. Lower cost per VM.¹
Some of the many core advantages of AMD Opteron processors.**

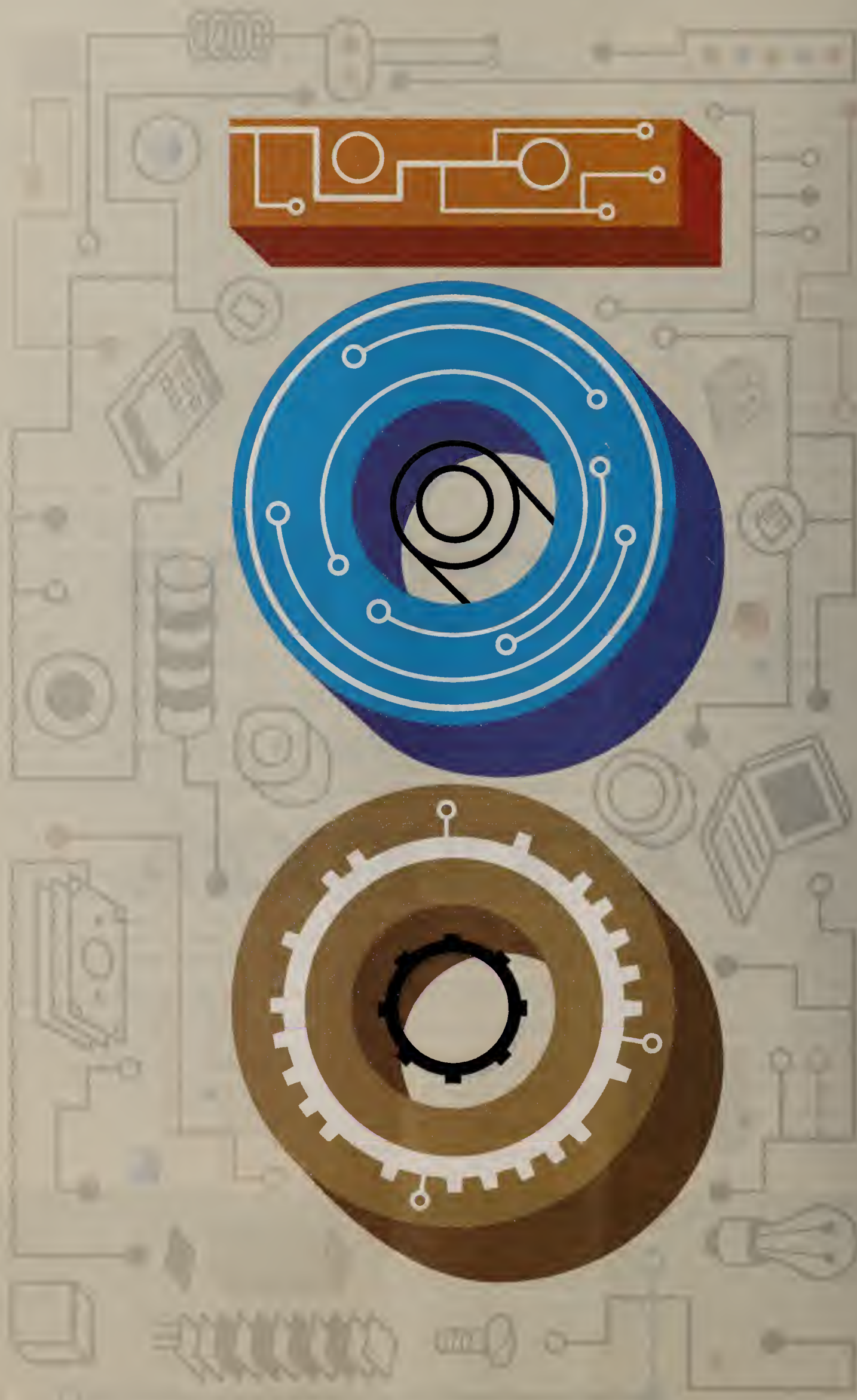
amd.com/virtualizationcio

¹ Based on 2P AMD Opteron-based Dell PowerEdge R715 (24 cores) @ \$16,546 and 2P Intel-based Dell PowerEdge R710 (12 cores) @ \$16,451. Both include 32GB memory, 2 146GB hard drives, RAID 0, standard warranty. R715 includes VMware vSphere Enterprise Plus 4.1 2-CPU license, R710 price includes VMware vSphere Enterprise 4.1 2-CPU license. Utilizing 1 VM per core AMD = \$689/VM (\$16,546/24), Intel = \$1,370 (\$16,451/12)

² Comparison of 12-core AMD Opteron 6100 Series processor versus 6-core Intel Xeon 5600 series and 8-core Intel Xeon 7500 series processors

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GROWTH CURVE

This year's winning companies show the power of innovative IT to transform business

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BY KIM S. NASH

every year, the CIO 100 Awards recognize companies that are the best at using IT to achieve business value. We honor ingenuity as well as pragmatism: companies that take risks with new technologies as well as those that create change through sheer will and straightforward smarts.

The list of 2011 CIO 100 Award honorees is striking for how many of the winning projects comprise multiple steps on a continuum of corporate progress. Executing a project well is a given. Stringing several excellent projects together in support of evolving business strategy goes beyond alignment. It shows IT as the integral and powerful force needed to push companies to do more, be more, grow more.

For example, Graham Group, a \$2 billion construction company, built a

strong technology infrastructure that allowed it to break into new markets, even during a recession. During the recent rise in personal bankruptcies, credit card issuer Discover Financial Services deployed analytics technology that helped it hold the line on bad-debt write-offs. Baker Hughes, a \$14.4 billion oil and gas services firm, created video and collaboration applications to support its reservoir and rig consulting and services business and bring in extra revenue.

Brannon McDaniel, VP of IT with HealthSouth, convinced the board that the company's hospitals could perform even better if they had unified data to use in decision making.



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Other winners shook up business as usual so that their companies run better. PNC Financial Services developed patent-pending analytics technology that smoothed integration of its National City acquisition. Sprint Nextel mapped its entire technology infrastructure to the business tasks each piece of hardware and software performs so it could predict outages and improve uptime. HealthSouth, after pulling itself free of a financial scandal that sent senior executives to jail, set out on a path to increasing profits by using common metrics to manage its high-performing hospitals. (For the complete list of winners, see the fold-out section starting on Page 33.)

Like these CIO 100 winners, companies thrive when there is no divide between IT and business. "You have to have people in IT who know your business. Not just executive-level people, but all the way to individual contributors," says Brannon McDaniel, vice president of IT at HealthSouth. Companies at their best have nothing to align, and they set the pace for their competitors.

Forget the Past

There is no better catalyst for bringing IT and the rest of the business together than the prospect of corporate death. The Securities and Exchange Commission, in 2003, accused HealthSouth of falsifying financial statements by up to \$2.7 billion over several years. In 2005, former CFO William Owens received a five-year sentence, a portion of which he served in prison. Then CIO Ken Livesay was sentenced to five months in 2010. (CEO Richard Scrushy was eventually acquitted.) The company hired new leaders who had to restate four years of financial results and steer HealthSouth away from bankruptcy.

McDaniel has been with the company for 13 years, which means she worked through the accounting scandal cleanup as a systems manager, then as a director of corporate systems. At the time, IT wasn't regarded as strategic, McDaniel says. "We were not being used effectively."

But IT's help in putting together the financial restatements,

PHOTO BY BILLY BROWN

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IT'S TIME TO BUILD A NEW NETWORK.

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while launching a new ERP system to shore up HealthSouth operations and accounting practices, improved the group's reputation. The arrival of new leaders with new thinking at the top of the company also helped, she says. "We were able to show them what we could do."

HealthSouth earned its CIO 100 Award for Beacon, an analytics system built on Oracle databases and QlikView reporting tools that, for the first time, gives HealthSouth's 97 inpatient rehabilitation hospitals unified data in dozens of categories. These include labor and therapy productivity, supply-chain expenses, and patient satisfaction. All 97 hospitals run Beacon and are able to compare themselves against each other.

Although Beacon launched two years ago with just a few reports for all the hospitals, the system is now key to HealthSouth's strategic plan for the next few years: to improve labor productivity while increasing patient satisfaction. Beacon analyzes metrics, including labor costs as a percent of revenue and employees per occupied bed; the numbers help executives

decide how to change the way a given facility operates. CEO Jay Grinney and other top executives talk up Beacon in calls with Wall Street, saying IT has provided a competitive advantage. "It's not often that you have an IT group that will come to operations saying, 'How we can help bring value to you?'" Mark Tarr, executive vice president of operations, told investors last November. McDaniel was invited to present Beacon to the board of directors last year—a first for IT.

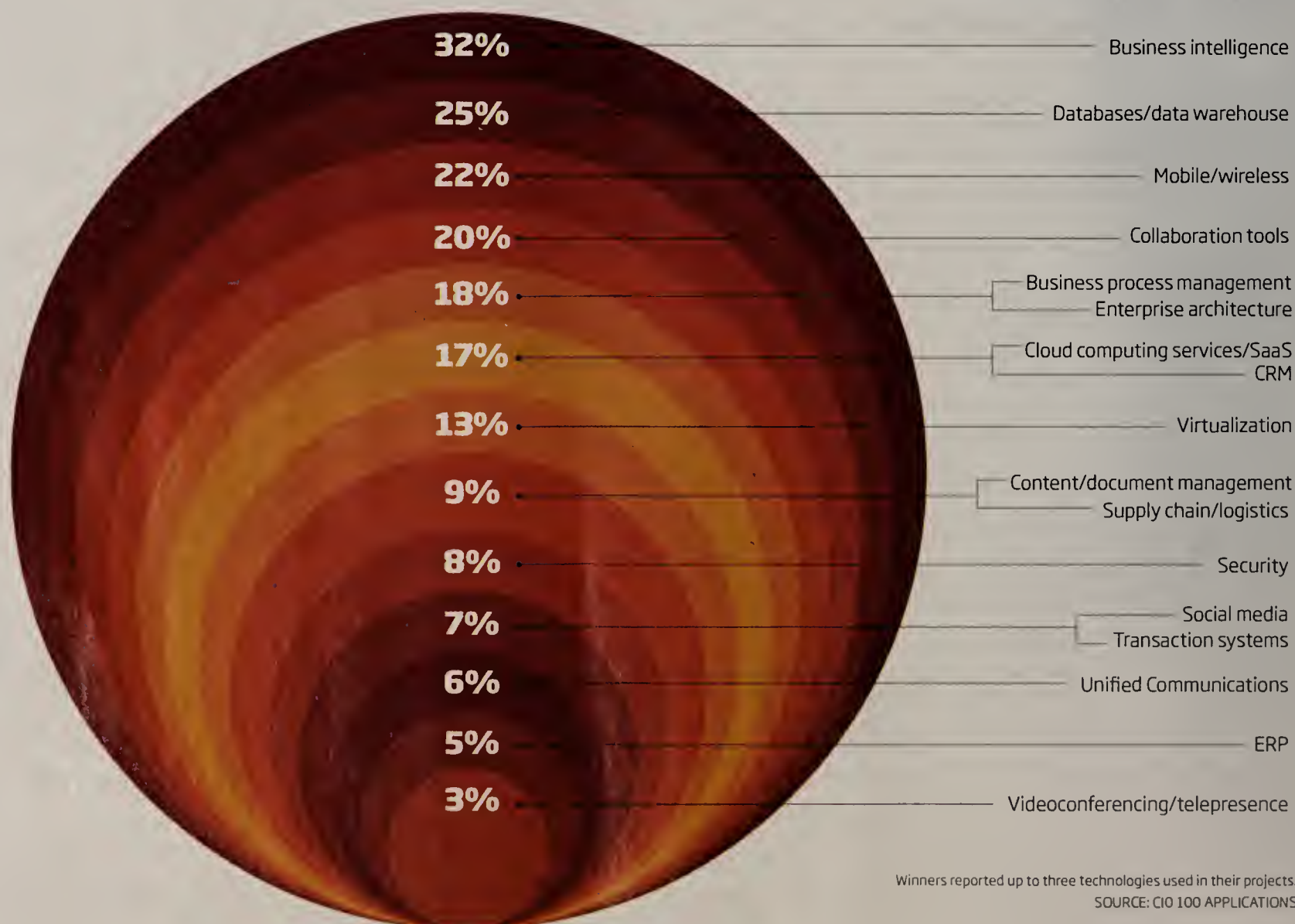
"We said to them, We have a pretty well-managed business with hospitals that do well financially. But they never had data to help them manage. With Beacon, think how much better we could be," she said. "That resonated."

"Brannon is very well respected. The president and CEO know who she is," says Darren Freeman, a systems manager who was instrumental in developing Beacon. "Our credibility [in IT] benefits from what she has accomplished." And that, in turn, allows IT room to try new things. For example, Beacon will expand this year to cover care-management data, measuring 12 types of data,

Innovation With Intelligence

CIO 100 winners used diverse technologies to advance corporate strategy, but many focused on systems for analyzing and sharing business data

Percentage of winners using...



including which therapies are most effective in which circumstances. After that, blending care data with patient satisfaction data will show which HealthSouth hospitals produce the best patient outcomes and the highest level of patient satisfaction, pointing the way to best practices that all the company's facilities can adopt, McDaniel says.

Think Long-Term

We often think of IT in terms of projects with clear start and end points, but IT also, and perhaps more importantly, performs long-term transformational work. Evolving IT infrastructure over time is vital to supporting evolving business strategy, says Jack Bergstrand, a CIO 100 judge and CEO of consultancy Brand Velocity.

"True strategy comes from making conscious decisions to feed certain things and starve other things and, most importantly, stop some things," says Bergstrand, who is also a former IT executive at Coca-Cola.

Sometimes the seeds to produce a major business shift must be sown over a long period, agrees Kim Johnson, EVP of corporate development and CIO of Graham Group. The construction industry is among the first to feel changes in the economy, good or bad. The very largest construction firms are usually big enough to weather the storm—they have established bank credit and well-known names. The smallest also survive, usually by picking up more subcontracting work. But the middle suffers because these companies have a harder time finding financial backing for new projects, Johnson says. The competition intensifies.

Ten years ago, as the dotcom bubble burst, Graham Group's senior leaders foresaw trouble unless the company could grab business from struggling competitors. Graham Group had a good reputation, Johnson says, but it had to improve its operations before it could go after bigger deals. The company had to, for example, be able to juggle several projects at once and better manage its staff costs.

Most importantly, according to Johnson, the company had to unify its technology and share best practices so it could streamline operations. Putting in a central IT infrastructure ticked off local offices that suddenly couldn't make their own choices about technology, he recalls, "but it was the only way."

The infrastructure and business process redesign work went on for several years, leading to Graham Toolbox, a collaboration system that runs in Graham Group's private cloud and that earned Graham Group its CIO 100 Award this year. The investments are providing efficiencies that have helped the company transform its revenue mix. Graham Group ranks construction deals on a scale of one to five, from small to large. In 2001, nearly all of its revenue came from level two projects. Last

year, half of its revenue came from level three or four projects—valued at up to \$500 million. Average profit margins have more than doubled.

Graham Toolbox provides portals via Microsoft SharePoint and secure websites that allow employees in various roles, such as construction site managers and regional executives, to see custom views of building projects in progress. The system gives them images and data, plus the business intelligence tools to analyze the information. With access to business data from anywhere, the company is able to expand its reach geographically and win more lucrative business. For example, the Minneapolis branch is overseeing a project in Texas, with on-site supervision originating from California.

"Having consistent business processes and delivering them via the cloud allows us to much more easily monitor and support project operations at a distance," Johnson says. "Toolbox makes it easier for managers to oversee more work across larger areas with less experienced staff."

Now Graham Group is contemplating how to use the bad economy to make another step-change in its business, Johnson says, perhaps breaking into the ranks of Fortune 1000-caliber companies. "We're looking at IT as a major driving force," he says.

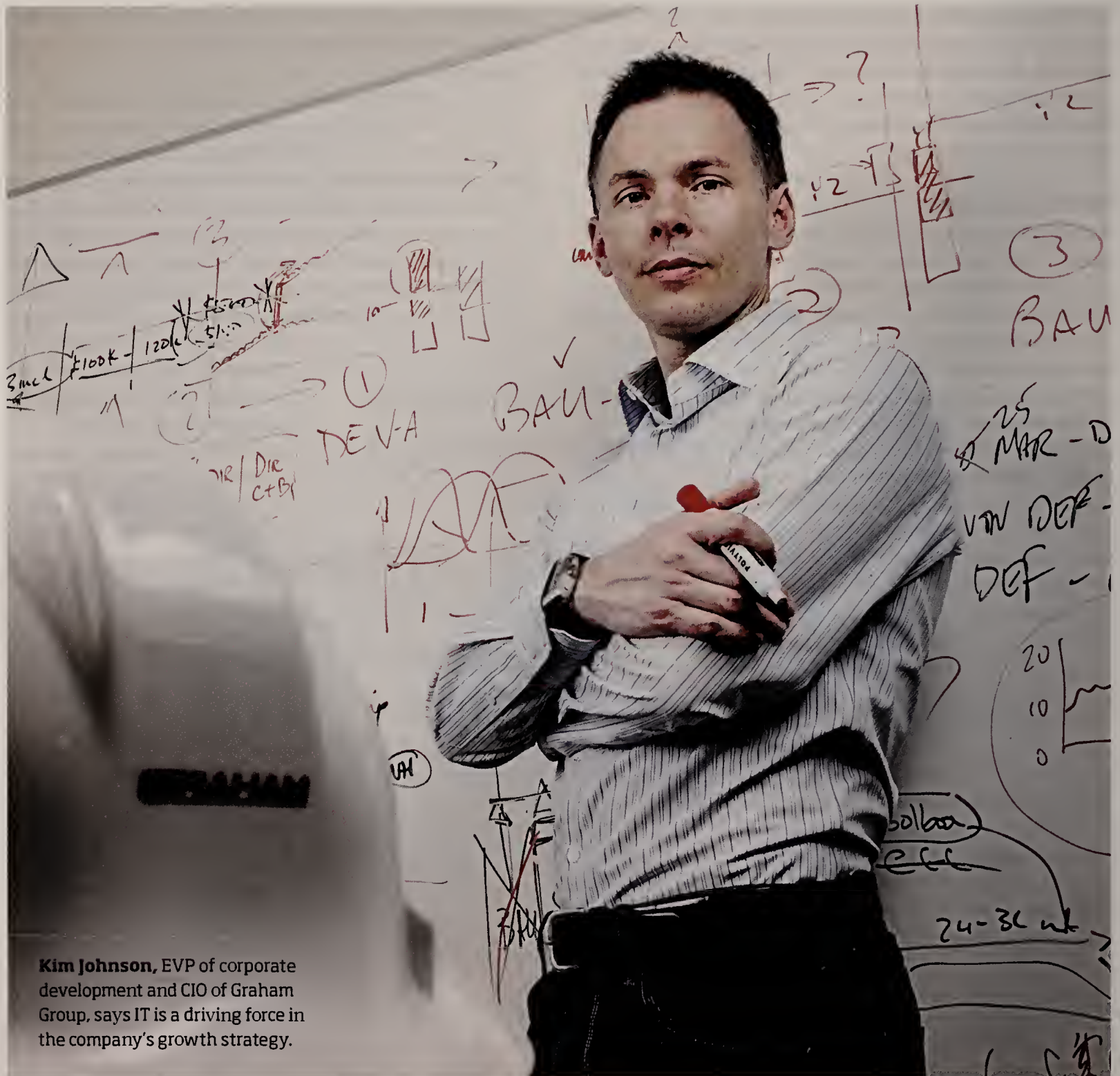
Winner Sprint Nextel has also traveled a continuum of IT change. The goal: to become an "intelligent enterprise" by simplifying IT. The telecommunications carrier, perpetually behind AT&T and Verizon in sales and customer satisfaction, wanted to consolidate servers and applications to eliminate points of failure, improve

manageability and reduce costs. Doing so would enable IT to better anticipate technology problems and prevent outages, says Peter Campbell, senior vice president of IT.

Over four years, Sprint reduced the number of applications it supports by 30 percent while virtualizing servers and storage. The company won the CIO 100 Award for a Web-based knowledge-management system that lets employees perform incident, change, configuration management and business-service management through one door. Previously, they used a number of tools, many of which were homegrown and had different interfaces. The new system, built on Hewlett-Packard's Service Manager, monitors and reports on the performance of Sprint's IT systems so the IT group and other employees can spot issues sooner.

But Campbell, working with Josh Morton, Sprint's vice president of enterprise services, wants to streamline further. For example, late last year, the company launched an all-out

Stringing several
excellent projects
together in
support of
evolving business
strategy shows
IT as the **integral**
and **powerful**
force needed to
push companies
to do more,
be more,
grow more.



Kim Johnson, EVP of corporate development and CIO of Graham Group, says IT is a driving force in the company's growth strategy.

effort to find systems that were underused or not used at all. Meanwhile, Sprint is mapping its software and hardware to the exact selling, servicing or billing service each piece of technology enables. The IT map shows connections among servers, software and networking equipment, but it also shows which business systems rely on which pieces of infrastructure, Morton says. Whenever someone at Sprint tweaks code or reconfigures a server, IT and business operations staff will be able to know precisely which tasks may be affected. The information will help IT perform better for Sprint colleagues and, in turn, Sprint customers.

As a result of these efforts, the company has eliminated 35,000 spreadsheets it had produced, showing thousands of daily IT infrastructure issues and changes. The HP tools now track everything in one place. With the new map and consolidated data, Sprint expects to decrease unplanned downtime of

its systems by 20 percent this year, Morton says.

But IT no longer has to wait for end users to report technology problems like network slowdowns or outages, Campbell says. "Sometimes, we call a business unit and say, 'You might not have noticed it yet, but we had this problem and you might get a call. We just wanted to let you know we fixed it,'" he says. "That's a nice call to make."

Enable Rapid Response

Building an accurate early-warning system is a sure way to increase the love between IT and non-IT functions. But first, the IT group and end users must understand and agree on how marketplace activity affects the company and vice versa, says Glenn Schneider, CIO of Discover. This goes not just for the CIO and senior colleagues, but for everyone who helps build a new IT system, Schneider says. Development of Discover's



CIO100-winning customer analytics system is a case in point.

As the recession took hold in 2008, Discover had wanted to make better use of data about its credit card customers. But typically by the time IT released new applications, the atmosphere had shifted and so had the problems users wanted to solve, Schneider says. "The business was frustrated. We all were."

A big part of the delay: It could take months to populate Discover's data warehouses with information that analysts wanted. With a 32 percent spike in personal bankruptcies between 2008 and 2009, Discover needed to know more quickly which customers were at risk. More than that, managers wanted to spot risks before they bloomed, Schneider says. "Write-offs were going up, receivables were declining. How could we get in front of it?"

An important aspect of Discover's CIO 100 Award is a process the IT group developed for making data available more rapidly. On the IT side, Schneider stepped up the use of agile development methods, including frequently consulting with business-side counterparts about which new data to incorporate into the warehouse. Frequent prototyping of applications, another agile development hallmark, ensures IT stays in sync with what users request.

But speeding up IT wasn't enough. Schneider also had his team analyze the interactions between IT and the ultimate users of the new systems. They concluded that business units weren't sending staffers with decision-making authority to the IT meetings. That hampered project delivery, because it required follow-up and more meetings to get the right people to approve project proposals, requirements and changes.

Schneider told his executive counterparts they had to send their best people to IT meetings. They complied, and now Discover has streamlined interactions between technical and business colleagues. Data sourcing projects are delivered 65 percent faster, Schneider says, and Discover

The Judges

Each of this year's 300-plus CIO 100 entries was reviewed by two members of our judging panel

Dennis Anderson
Professor and
Chairman of
Management and IT
St. Francis College

Jesus Arriaga
President and CIO
*CIO Strategic
Solutions*

Robert Austin
Dean, Faculty
of Business
Administration
*University of
New Brunswick
at Fredericton*

Doug Barker
President
*Borker and Scott
Consulting*

Paul Bergamo
General Partner
*NewVontage
Partners*

Jack Bergstrand
CEO
Brond Velocity

Bob Bruce
President
*Blue Cod
Technologies*

Susan Cramm
Executive Coach,
President &
Founder
Valuedance

Howard Dresner
Chief Research
Officer
*Dresner Advisory
Services*

Les Duncan
Former VP
& CIO
Atmos Energy

Charlie Feld
Founder
*The Feld Group
Institute*

Jerrold M. Grochow
President
*Jerrold M.
Grochow, LLC*

Louis Gutierrez
Principal
Exeter Group

Mike Harnish
CTO & CIO
EthicsPoint

Martha Heller
President
*Heller Search
Associates*

Cathy Hotka
Principal
*Cathy Hotko and
Associates*

Michael Hugos
CIO at Large
*Center for Systems
Innovation*

M. Eric Johnson
Professor
& Director of the
Center for Digital
Strategies
*Tuck School of
Business,
Dartmouth College*

Matt Karlyn
Partner
Foley & Lordner

Kristen Lamoreaux
President
Lamoreaux Search

Michael Lawson
Professor of
Economics and
Associate Dean of
Executive Programs
*Boston University
School of
Management*

Jerry Luftman
Executive Director
and Distinguished
Professor
*Stevens Institute of
Technology*

Abbie Lundberg
President
Lundberg Medio

Executive Director
*Business Ecology
Initiative*

Thornton May
Dean
*IT Leadership
Academy*

Jerry McElhatton
President
*Virtual
Resources*

Jim McGee
Managing Director
*New Shoreham
Consulting*

Kavin Moody
Executive Director
of the Center for
Information
Management
Studies
Bobson College

Honorio J. Padron
Principal & Global
Practice Leader of
Global Business
Services and IT
The Hockett Group

Bart Perkins
Managing Partner
Leverage Partners

Ron Ponder
President
The Ponder Group

Chris Potts
CIO Futurist
Dominic Borrow

Laraine Rodgers
Founder &
Principal Strategist
*Novigating
Transitions*

Jeanne Ross
Director &
Principal Research
Scientist
*MIT Sloan Center
for Information
Systems Research*

**Karen
Rubenstrunk**
CIO Executive Coach

Howard Rubin
CEO & Founder
Rubin Worldwide

**Phil
Schneidermeyer**
Partner
*Heidrick &
Struggles*

Robert Scott
Director of the
Information Systems
Executive Forum
*Ross School of
Business, University
of Michigan*

Sheila Smith
President
*Omego Point
Consulting*

Jim Sutter
Senior Partner
*Peer Consulting
Group*

John Sviokla
Business Leader
for Strategy and
Innovation
*Pricewaterhouse-
Coopers*

Rick Swanborg
President
ICEX

Professor
Boston University

Madeline Weiss
President
Weiss Associates



Discover CIO **Glenn Schneider** improved delivery of business data by using agile development techniques and by getting end users more involved in project decisions.

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can respond to market changes more quickly. For example, if some customers steadily decrease the amount they pay each month, Discover debt counselors can call these customers. "These are not necessarily conversations about sending your minimum due," he says. "There are people who are struggling, and we like to think we can give them guidance."

In May, when tornadoes wrecked Joplin, Mo., Discover analyzed geospatial data to identify customers there who might appreciate offers to reset the terms of their credit card agreements. And what began as a way to stem corporate losses lives on as a tool for long-term growth. Discover's financial and technology experts suggest data points to add for more accurate and creative analysis. Schneider thinks customer loyalty will

improve if the company helps people manage their debt. Write-offs at Discover have been lower than at competing credit card companies recently, he says. "That didn't happen just by luck."

Change the Rules

Transformative investment often changes the rules for how you do business, but it may also set a new bar for other companies in your industry.

In 2008, PNC Financial Services Group spent \$5.6 billion to buy National City, a bank troubled by bad mortgage investments. The acquisition was PNC's biggest, doubling its customer base to 12 million. Compared to other large acquisitions PNC had made in recent years, "it was lot more complex," says CIO Anuj Dhanda.

PHOTO BY KEVIN MIYAZAKI

In a typical integration, PNC's IT group might create databases of incoming customers to assign new account numbers, then run tests to be sure file mergers went OK. This time, Dhanda wanted to do as much pre-integration troubleshooting as he could. One reason: The bank wanted to quickly realize the \$1.2 billion in savings that executives promised when they announced the deal (they ultimately saved \$1.8 billion). Doing so would help to keep PNC strong compared to its competition, even as other banks were going under. The IT group built a predictive modeling system to simulate integration of customer accounts and uncover potential problems. Customers with the same name, for example, might have their accounts confused. Or a corporate customer with accounts in several regions might not convert its accounts all at once.

The application used tools such as Informatica analytics to analyze 12 billion possible account variations. It correctly predicted potential problems with an error rate of less than one in 4 million. PNC finished the integration in 18 months—six months ahead of schedule—without major problems, Dhanda says.

Aside from the IT benefits, PNC's customer service department was able to contact National City customers with specific information about when and how their accounts would be converted. Customer service agents could mail, email and call customers, as well as include letters in bank statements—45 million opportunities to interact, which, Dhanda says, helped keep customers' confidence that they wouldn't be lost in the merger. The system also suggested the best methods for contacting customers, based on how they do business with PNC.

Retention was in the high 90 percent range for individuals, he says, and PNC held on to National City's largest commercial accounts. Dhanda says the technology gives PNC a competitive advantage as the banking industry continues to consolidate. PNC applied for a patent on the system last year and awaits approval. "This is exciting stuff," he says, and it will change how PNC does acquisitions in the future.

What consultant and CIO 100 judge Louis Gutierrez calls "extraordinary customer empathy" on the part of IT can also produce game-changing applications—and can immerse IT in setting strategy. Clif Triplett, CIO of Baker Hughes, is among the CIOs who have parlayed an IT idea into a new business model. Baker Hughes manages rigs and provides equipment and personnel to oil and gas companies such as Exxon and Anadarko. Its CIO 100 Award-winning project is a new service based on electronic collaboration and information management—a revenue-generating line of business that originated in the IT group. The system, called Beacon (unrelated to HealthSouth's system), combines mobile applications with video and Cisco unified communications technology to monitor oil and gas exploration projects in remote areas.

If a piece of equipment on an oil rig in the North Sea breaks,

workers there can use a mobile device to initiate a videoconference with an expert at Baker Hughes. They can beam video of the problem via satellite and comb email exchanges for keywords that may help diagnose the failure. "You're in the jungle or the desert. You encounter an issue and need to bring a geoscientist on location," he explains. "With video and data services, we can essentially bring the right person from anywhere in the world to that site." With access to offsite expertise, the number of people needed to run a rig could be cut by half, which is a hefty cost savings, he says.

As of December, Baker Hughes had signed up 99 customers for its new services, including some that weren't using any other products from the company on the rig where the services are deployed, Triplett says. The company says it is the first to offer such technology, and Triplett expects data services to dominate future business initiatives.

Guille Arango, the IT vice president appointed to lead the development of Beacon, also sits on the company's technology leadership council to ensure that any new oil exploration products it builds will support Beacon. Engineers must, for example, consider data transmission mechanisms when building a new piece of equipment, Triplett says. While Baker Hughes can't predict every data stream that will be valuable down the road,

How We Chose the CIO 100

Beginning last November, we solicited applications for the 2011 CIO 100 Awards through ads in CIO and our online newsletters, and through electronic mailings to our print subscribers, event attendees and publicists who sign up to receive our editorial announcements.

Entrants filled out an online application between November 2010 and late February 2011. Although most applications came from companies headquartered in North America, the pool included entries from multiple continents.

Two CIO 100 judges—who included former CIOs, academic experts and independent consultants—read each application. The judges evaluated the applications according to two criteria: innovation and business value. Applications that received a score of 15 or higher (out of a possible 20) were selected for a second round of scrutiny by CIO editors.

We examined how each company stacked up against the others in the pool, putting emphasis on submissions that told the best stories about generating business value through creative and cutting-edge uses of technology. We sought to cull the most exciting initiatives from the pack and reward them with the CIO 100 honor.

The companies we selected for this year's CIO 100 Awards range from small nonprofits to multi-billion-dollar global powerhouses, and they come from every industry. Companies had to demonstrate not only that they were able to create new value using IT and to execute their project well, but also that they did so in uncommon, innovative ways: pioneering a new technology, applying a familiar technology to a new purpose, setting the bar higher for their competitors. We also emphasized projects that, due to their scope and impact, are helping propel companies to a more profitable future despite continued economic challenges. In short, these companies are technology leaders.

—Elana Varon

the company should anticipate that many will be, and so should build in ways that allow it to mine information from sensors, video and other sources, he says.

Beacon, Triplett says, shows that IT "is an enabler for profitability." **CIO**

Contact Senior Editor Kim S. Nash at knash@cia.com. Follow her on Twitter: twitter.com/knash99.



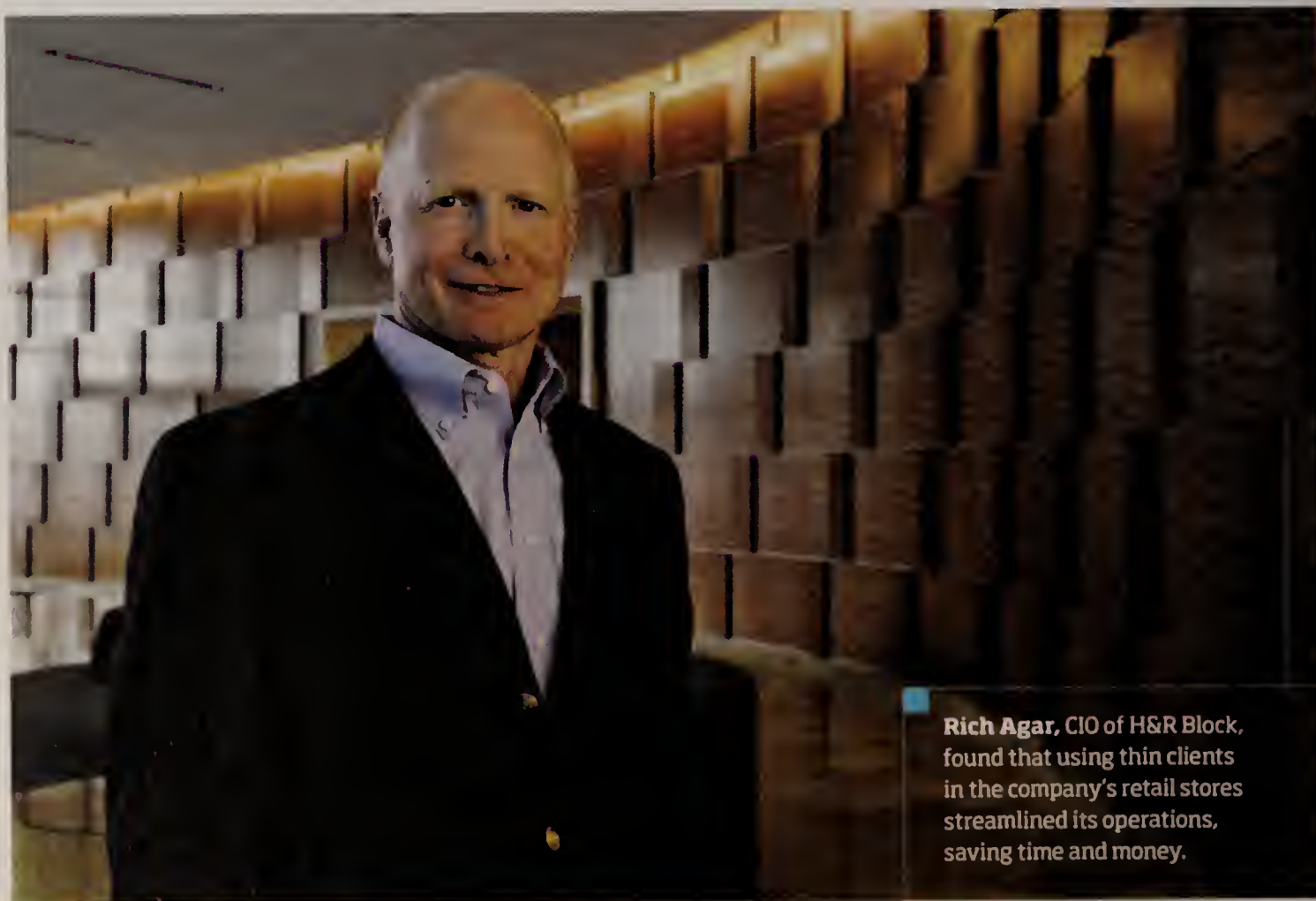
Desktops and Taxes

H&R Block calculates big savings with thin clients **BY KIM S. NASH**

H&R Block's virtualization project—a CIO 100 Award winner this year—is putting thin clients in the tax preparer's thousands of retail stores in an effort to simplify its operating environment and cut expenses. The change should also help it to better compete with chains such as Jackson Hewitt, as well as with independent tax preparers and software-only rivals such as TurboTax and Intuit.

"Typical of any mature company, the competitive landscape is tough. You're continually looking at ways to optimize," says Rich Agar, CIO at H&R Block. By cutting costs, the company can lower its prices and compete more effectively, he says.

The company has spent \$15 million to \$20 million a year on PCs with a lifecycle of three to four years. By simplifying the IT used in its retail stores, including shifting from PCs to virtualized thin clients, the company expects to save \$10 million to \$15 million in hardware expenses. Plus, virtualization makes it easier to provision temporary employees hired for tax season while keeping data more secure, Agar says. >>>



Rich Agar, CIO of H&R Block, found that using thin clients in the company's retail stores streamlined its operations, saving time and money.

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►► **Desktop virtualiation** Continued from Page 52

"Organizations dealing with seasonality can use desktop virtualization to manage capacity and enable quick turnaround by just plugging in thin clients instead of PCs," says Ian Song, a senior research analyst at IDC, a sister company of *CIO* magazine's publisher. "There are several benefits rolled into one."

Ultimately, Agar wants to double the useful life of H&R Block's hardware. Thin clients from Wyse Technology have no disk drive and fewer moving parts, which means they last longer, he says. They also use less energy; Agar estimates that the thin clients are at least 75 percent more energy efficient than PCs. With no local storage on the Wyse machines, H&R Block's operating system and applications are refreshed every day upon log-in to the corporate network.

Technology Lockdown

Two years into the project, which is expected to last four to five years, Agar says he wishes he could move faster. He has deployed 10,000 of an estimated 80,000 seats. But because H&R Block's business is seasonal and time sensitive, the company limits changes during tax season. Nothing can be changed from December through April.

According to the company, there are 11,000 H&R Block stores, but only 4,400 are open year-round. During tax time, the number of employees balloons from 7,700 to 100,000, and the company takes in 80 percent of its annual revenue in the five weeks leading up to April 15, Agar says. He doesn't want to roll out new technology during that time because that could threaten the company's primary revenue stream and the personal financial information of millions of customers. These unusual conditions "inhibit our ability to move at a rapid pace," he says.

Agar chose Wyse in part because it bundles software with hardware, which helps the company avoid interoperability issues. He adds that he also wanted to be able to influence the product plans of the vendor he signed on with. For example, H&R Block is working with Wyse to shrink the size of the operating system to reduce the time it takes to boot up each morning.

"I wanted to control my own destiny in terms of what we needed in rollout," Agar says.

Contact Senior Editor Kim S. Nash at knash@cio.com. Follow her on Twitter: twitter.com/knash99.

Communication Cure

BY CINDY WAXER

At **Texas Children's Hospital (TCH)**, communication can be a matter of life and death. But with nurses spending more time at bedsides than behind workstations, the Houston-based healthcare facility was struggling "to drive effective communication between nurses, physicians and providers of care," says Myra Davis, vice president of information services at TCH. To cure its communication ailments, TCH turned to a wildly popular consumer device: the Apple iPhone.

What They Did: TCH selected Voalté as its communications provider and set up a community charging station where nurses grab an iPhone at the start of each shift. Upon log-in, the device recognizes the employee's phone number and automatically configures their Voalté mailbox and individual preferences. Nurses use the device to issue status updates indicating whether they are available or busy and to send text messages to individuals or groups. An alarm-management system automatically prioritizes and delivers critical care alerts directly to the iPhone and provides automatic escalation if a user is offline.

How They Did It: Ensuring both instant communication and mobility among employees required some careful forethought. Here's how TCH created a framework for the project's success:

1. Test the infrastructure. Although the iPhones are tied directly to the hospital's existing wireless infrastructure, which is composed of commercially available hardware, "the biggest challenge was making sure our network infrastructure could support [the devices]," Davis says. To minimize risk, TCH conducted a number of pre-deployment trials "to make sure we had access-point and bandwidth coverage in all of our areas."

2. Think through processes. Because nurses can be inundated with alerts and become desensitized to them, TCH set up rules based on the severity of a patient's case and the type of care they require, Davis says. Employees receive only the alarms that are pertinent to them, and even these are delivered based on predetermined degrees of urgency.

3. Stick to business. To prevent employees from updating their Facebook statuses at work, TCH restricted the iPhones to texting only, locking out entertainment options. "That's a security role," Davis says. "These devices are for patient care, not for personal use."

4. Start small. To test the waters, the healthcare facility rolled out its iPhone project at a new campus and maternity center, "where the environment was new, where it was time to try something different, and where we had a very controlled environment to do it in," Davis says.

Cindy Waxer is a freelance writer based in Canada.

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ANALYST VIEW

Bridging the Marketing-IT Divide

Frustrated by long IT rollouts, speed-driven marketing teams are taking matters into their own hands. But there are ways CIOs can reach out. **BY NIGEL FENWICK**

Every day we see examples of how the customer is gaining power over everything from brands to governments. Today's digital economy demands that marketing teams react at the speed of the market: product-development lifecycles that once lasted years are now compressed into months or weeks; customer-service expectations have moved from same-day response to instant response; public relations snafus must now be handled in minutes, not days; and marketing campaigns must be adjusted in real time based on instant feedback from social media.

In this new empowered era, technology is vital to success. Yet for many marketing teams, IT looks like a slow, outdated group that is stuck in the last century, trying to re-engineer business processes with vast ERP systems that take years to implement. As a result, chief marketing officers have been looking to the cloud and software as a service for their technology needs, bypassing IT. Unfortunately, it is the CIO who has to pick up the pieces when it comes to integration and security.

There are signs, however, that IT and marketing are

beginning to resolve long-held misunderstandings. Progressive CIOs with strong CMO partnerships are hiring IT professionals with experience in marketing services to work alongside marketing teams on projects. To drive more speed, these IT leaders are embracing process changes focused on delivering continuous results.

To improve relations between IT and marketing, Forrester recommends the following:

- Move IT from the department of "no" to the department of "here's how" by enabling early pilots of new technologies that support marketing campaigns.
- Get agreement with the marketing leadership team on the skills and resources the IT team will bring to help stretch limited marketing dollars.
- Set up a joint IT-marketing team—marketing explains what needs to happen and IT shows them how.

For CIOs willing to make the leap, marketing is the biggest opportunity for IT since the Internet.

Nigel Fenwick is a vice president and principal analyst at Forrester Research.

Strategize for Better CRM

CRM once served a simple purpose: It kept track of your customers, their addresses and their orders. Now there's far more that comes under the CRM umbrella, such as connecting with your customers through social media and being able to instantly transmit customer data to a call center agent when needed. You need to look at your CRM infrastructure to determine if the existing system still meets your needs.

Mary Wardley, an analyst with IDC (a sister company to CIO's publisher), says the best way to do that is to start with the customer relationship

strategy in your enterprise. Without knowing what you want, where you've been and where you're going, it will be hard to reach your goals, she says.

"No matter what kind of company you are, you must have a [CRM] strategy because that is your customer service strategy," Wardley says.

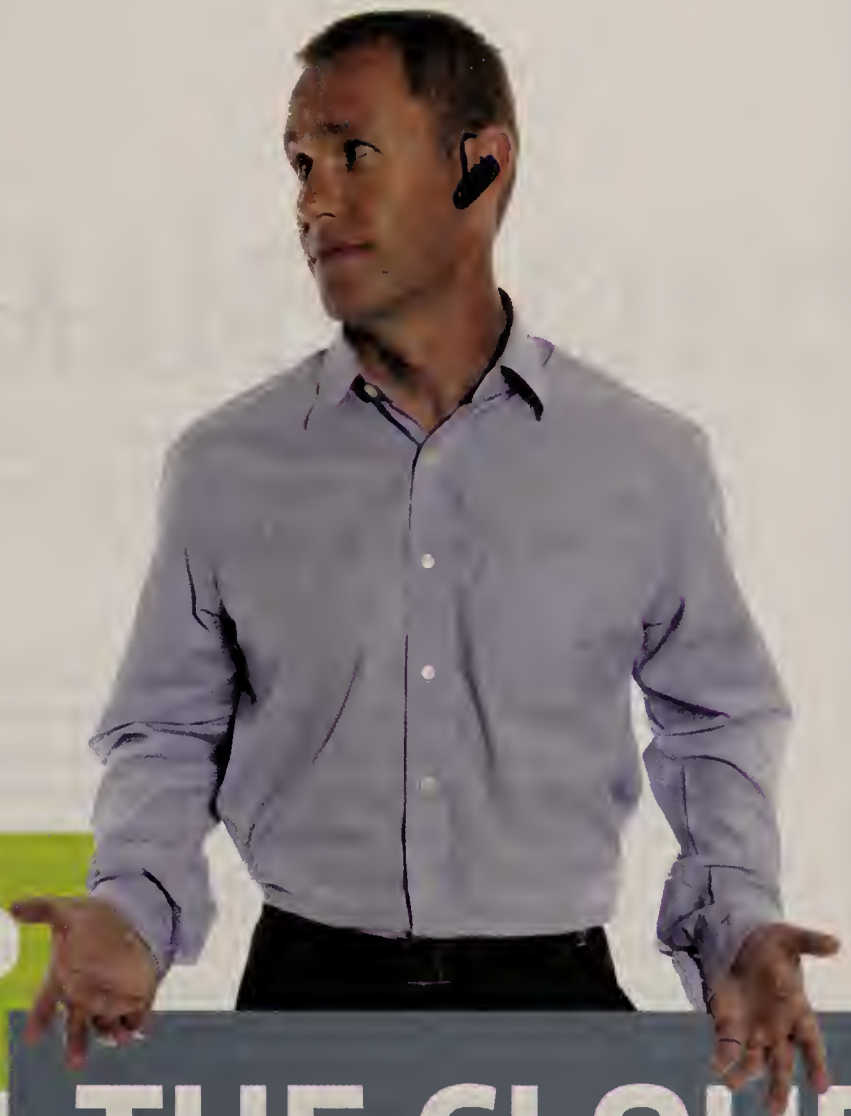
You can then bring CRM applications into the discussion to ensure they support your strategy and help meet corporate goals.

One key to remember, according to Wardley, is that your go-to-market strategy evolves frequently, sometimes daily, depending on your business and the competitive landscape. This ever-changing data can help your enterprise make the right decisions about how your CRM systems

are working and what needs to be reworked or replaced.

Contemplating changes doesn't necessarily mean your CRM system has failed, only that new features may raise your CRM strategy to the next level. Wardley recommends asking yourself whether your CRM upgrade can be accomplished through simple add-ons or if a major overhaul is necessary.

"There's so much that's contingent on integration," she says. "If you bought a software package in 1999 and you're trying to deploy a new application today, are they going to work together? Over time it gets less likely you can maintain that application or find the skilled workers who can do it. And even if you do, it keeps costing you money." —Todd R. Weiss



LEGACY ERP

THE CLOUD

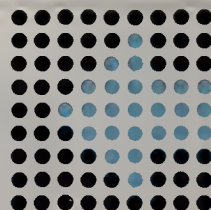
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A Bigger Platform

The CRM vendor wants to offer enterprises more collaboration, social networking and development tools **BY CHRIS KANARACUS**

THE PITCH

Salesforce.com might be synonymous with on-demand CRM software, but the company wants to play a bigger role in enterprise IT.

Originally, the company's Force.com development platform provided the means for partners and customers to write extensions or add-on applications for its CRM software. But Salesforce.com's technological reach has broadened through moves such as the acquisition of Ruby on Rails platform vendor Heroku and a Java development partnership with VMware. Now Salesforce.com can offer developers the ability to develop apps with widely used and accepted tools and languages. It also supports collaboration and social networking with tools like Chatter.

"Enterprise CIOs today are wrestling with speed," says CEO Marc Benioff. "How to deliver more innovation faster for their customers internally. We offer them a much faster, much easier, low-cost way to do that."

THE CATCH

Salesforce.com's long-term success depends on how Force.com evolves, especially as the company increasingly courts enterprises that are used to the flexibility of custom application development, says analyst Ray Wang, CEO of Constellation Research.

Salesforce.com faces competition in every area for which it offers tools and applications. Its challenge, according to industry experts, is to present itself as a place where CIOs can get all of these capabilities in an integrated manner.

Currently, Salesforce.com lacks strength in some areas—such as software-based tools for running marketing campaigns—that complement its original role as a CRM vendor, says Denis Pombriant, managing principal of Beagle Research. "They need

to at least embrace digital marketing and advanced marketing concepts as part of their messaging," according to Pombriant. "Right now, they've got a lot of vendor partners in the marketing space, and they're being careful not to disrupt it."

THE SCORE

Salesforce.com is already a presence in the world's largest enterprises, including DuPont, which has deployed its CRM software globally and recently rolled out Chatter. DuPont CIO Phuong Tram says Salesforce.com has deployed quickly—its big selling point. "It's the most adoptable system. We needed very little training."

DuPont is planning to deploy more cloud services in the next couple of years, Tram says, freeing IT staff to "focus a lot more on process and capa-

THE COMPANY

Salesforce.com

Headquarters: San Francisco

Employees: 6,000

2011 Revenue: \$1.7 billion

CEO: Marc Benioff

What They Do: Salesforce.com is best known for its on-demand CRM software. But the company is expanding rapidly into areas such as enterprise collaboration, application development tools and social software.

bilities, not just configuration work. Salesforce.com is one of our top four or five partners in that."

Pombriant says Salesforce.com will no doubt want to sell customers on its notion of social enterprises, which it conceives of as both connecting with customers through social media and collaborating internally through Chatter. "Unlike many other vendors of collaboration, they're not trying to go out and sell tech for tech's sake. They're doing a decent job of telling you how you win with it," Pombriant says.

Most companies have not bought into the notion of a social enterprise so far, Pombriant says. "They need to do some hard examining of their business processes and how they interact with their customers, and ask themselves if the methods they are using are going to take them through the next 10 to 12 years. I think the answer is no." Meanwhile, Salesforce.com is positioning itself as a place companies can turn to help them evolve.

Chris Kanaracus is a U.S. correspondent with IDG News Service.

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In-Demand Jobs Demand Attention

CIOs need to get creative to bring top IT talent on board **BY KRISTEN LAMOREAUX**

Candidates for high-demand IT jobs are declaring their independence. They want flexibility in the workplace. They want compensation and opportunities for promotion that astound hiring managers. And many of these top candidates have a take-it-or-leave-it attitude.

This isn't new, but with the unstable economic conditions over the past three years, companies have mistakenly come to believe the myth, "If you post it, they will come."

Today, CIOs need to balance financial discipline with in-demand technologies. "With improving conditions comes the reality of pent-up demand, and employers need to be increasingly nimble and creative with regard to finding talent," says Dave Ballai, CIO and vice president of commercial solutions at Reed Technology and Information Services. Rick Fabrizio, CIO at propane provider AmeriGas, agrees, adding that "the market is abundant with mediocre talent, but we're willing to stretch further to snag the high performers."

Finding the money for in-demand candidates isn't easy. "Creativity is paramount to being successful in hiring in today's marketplace," says Guy Lavalette, a CIO at a company in the Northeast. "Partnering with business-unit executives such as CMOs and reallocating some of their internal budgets [is] a strategy that has worked for me." For example, he says, CIOs and chief marketing officers must use social media and develop cost-effective search-engine optimization (SEO) and search-engine marketing (SEM) strategies to increase online exposure. Lavalette has successfully reallocated third-party SEO and SEM budgets to create roles that affect the bottom line. "It's a win-win: The company saves money, and IT [or] marketing has an internal expert to work on these key initiatives," he says.

CIO involvement during the interview process also brings cachet, as it demonstrates the role's value to the organization. Superstars have egos, and visibility and criticality can intrigue such candidates and potentially mitigate compensation concerns.

Ballai says it's important to give in-demand candidates access to senior management during recruiting, so they get a broader view. Fabrizio also emphasizes executive participation. "It's great when candidates feel the excitement and energy from the interviewers themselves," he says. "I personally want to be involved in the final round of interviews to either stop the hiring of someone who isn't a good fit or put on the full-court press" for the right candidate.

Craft Your Message

All three CIOs stressed the importance of crafting an overarching recruitment message. "We describe the exciting environment, where the candidates will be challenged

and rewarded for making a positive impact on the business," says Fabrizio. "I'll share with them the many examples of individuals advancing their careers here at AmeriGas and how they're helping the company to transform itself."

For AmeriGas, that approach has paid off. "We've hired a lot of high performers over the past year," Fabrizio notes. "Most job seekers want to be part of an organization that's making investments in technology and its future."

Of course, Fabrizio counters candidate demands with requirements of his own. "Experience, competency and attitude have to be part of the package," he says. "In the past, every department has had its mix of A-, B- and C-rated employees, but with [business] demands today, we can't tolerate the lower-rated staff anymore."

Don't waste the time of good candidates for high-demand roles. Put them into an expedited hiring process, and engage their hearts and minds. If they meld with your culture, get creative on the compensation. Wouldn't getting a product out to market faster be worth going the extra mile for an employee who's key to making that happen?

Kristen Lamoreaux is president and CEO of Lamoreaux Search, which focuses on sourcing IT professionals for hiring managers.

A role's value can intrigue superstars and potentially mitigate compensation concerns.

VIEWPOINT

**Dave Brown**

PRINCIPAL, ADVISORY SERVICES
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Brown leads KPMG's Technology IT Outsourcing Advisory group. In this role, he provides leadership support for both IT and business leaders to establish and implement industry accepted processes related to outsourcing transactions.

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Focus on the Business

Evolving outsourcing delivery models frequently include Cloud Computing. With Cloud's claims of cost savings and process improvement, making the right decision is a challenge.

There's a lot of information out there about cloud services, different delivery models, and claims of significant savings and streamlined processes. How does a CIO go about selecting the most effective delivery model for cloud services to best suit their company's needs?

As CIOs become more savvy strategists, they know it's not about the technology solution as much as it's about enhancing the business strategy and its ability to provide enhanced flexibility going forward. A clear understanding of the business objectives first allows CIOs to create competitive advantage through a cloud strategy. That said, we know many are hearing from their colleagues in the C-suite, "Put in the cloud. I heard we can save 30 percent." And it well may, taken in isolation. But does it really support the overall mission of the business?

but also very rapid deployment. A lot of that is foregoing the initial investment capital that traditional delivery models required as well as reduction on development time and maintenance costs. The CIO needs to understand all the financial aspects of the solution and the impacts affecting internal and external clients.

What are both the challenges and opportunities that have been generated by the evolution of the cloud technology and other advancements like mobile devices?

It has been a rapid evolution—not a revolution. Cloud solutions will continue to evolve and still have some real risks, such as data privacy and security, that are headline-making issues. Savings will vary across different deployment scenarios, with the highest savings going to those adapt-

"...CIOs need to be in better position to anticipate the business pace and bring services and products to market quicker than the competition."

CIOs taking a holistic approach to the business truly understand the solution better, and they focus on the risks and the controls that are important to their business mission. Adapting the right cloud strategies will create a competitive advantage that is sustainable, secure, repeatable and more advantageous in the global marketplace.

How should the CIO be looking across all their technology platforms and service delivery models to achieve strategic alignment?

Business leaders are hearing about their competition getting things done immediately and setting up environments overnight. That's a lot of pressure on CIOs. Today's technology helps make customer interactions happen almost instantaneously. There's an app for just about everything. So CIOs need to be in better position to anticipate the business pace and bring services and products to market quicker than the competition. They need to look at the overall profile of the delivery model, including functionality and cost, in this new light. Cloud offerings not only claim to enable big savings,

ing to public cloud. But can companies with client- and competitively sensitive information be willing to take the security risk? Can larger enterprises adjust their processes to non-customized environments and applications?

The agility of the technology to respond to clients has accelerated so fast, that we're seeing the next evolution of technology right on the doorstep: mobile devices like tablets and smart phones that enable buyers to be in an "instant environment" for virtually everything. And technology has created this collaborative space to get things done almost immediately, creating exciting business opportunities, but also placing big demands on CIOs.

And finally, as transformational business leaders, CIOs must consider all the issues, ramifications and factors that go along with continuous change. Change management must be top of mind as CIOs realize how quickly they're deploying the technology and how quickly people, both within the IT organization and throughout the enterprise, can adapt. They must educate, lead, inspire and anticipate on this constant journey through the cloud.

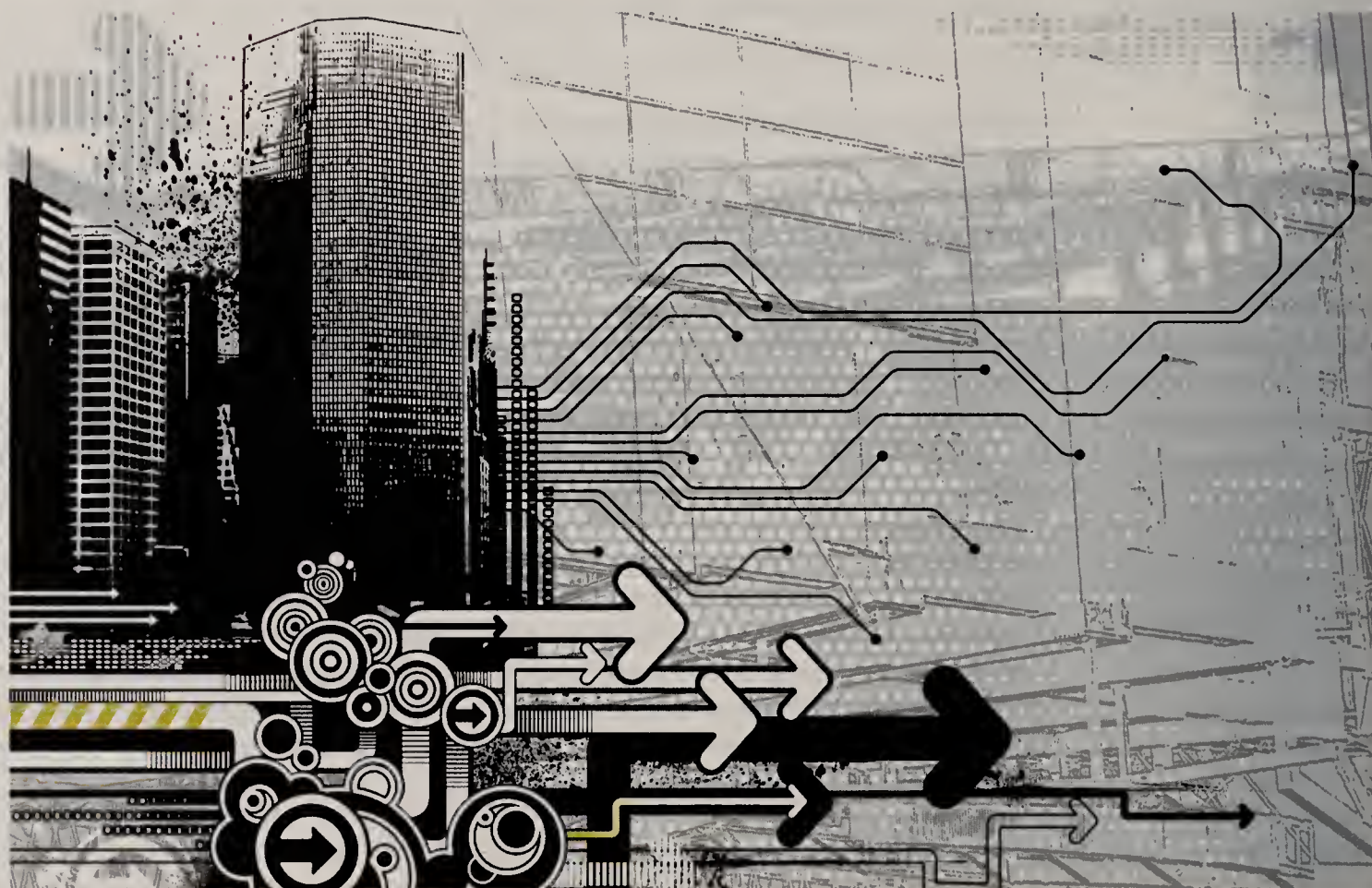


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Vince Kellen,
CIO at the
University
of Kentucky,
wants to create
an interactive
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environment
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Many IT teams take an existing portal and then enable it for mobile. Due to the sheer quantity of interactions, we are planning to do the opposite—design a portal that meets the needs of mobile users and then scale it for use on a PC. We feel that this approach could result in a much better interface for the mobile user. We also need to identify the right balance of what we do in a mobile Web interface versus a mobile installed application, and how to best integrate transactional data from ERP and other back-end systems. Skill development is another priority; we need to make sure that we have the right knowledge in the right roles to foster success in the mobile arena. ►►►

The CIO Executive Council is a global peer advisory service and professional association of more than 500 CIOs, founded by CIO's publisher. To learn more, visit council.cio.com.

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ADVICE Mobile apps are an important part of our disease-management program for diabetes patients who are monitoring blood glucose levels and need to get information anywhere at any time. When integrating our back-end systems, especially medical databases, we put a lot of effort into understanding requirements around data protection and security, and then confirming that they are in place for mobile. We look across the entire application architecture to make sure that our bases are covered on access points like Web browsers, PCs or mobile devices.

I agree with Vince's idea of approaching mobile portals differently than simply taking the PC version and making it accessible on mobile devices. The user interface just doesn't have the same amount of real estate, and you have to be much more selective about what you show and where you position it on the screen.

We start by creating one GUI for the Web, and then do that again to get the mobile version right. To determine which apps are client-installed and which are accessed via a browser, we use a decision matrix. My team considers things like the target user base and what they plan to do with the data. Viewing class schedules or checking sports scores could be done with a website; more UI-intensive tasks, like GPS, would require an installed app. The downside of installed apps is that you need to have a software-update and change-management strategy in place.

DAVE CORCHADO, CIO, ICROSSING

DEVELOP PORTALS SIMULTANEOUSLY



ADVICE Our company has a long history of building technology that runs across multiple platforms. We're fortunate in that we have a mature Web development organization that has been very successful in the transition to mobile development. Having this expertise on hand is invaluable—all of our mobile work, including the work we've done on iPad and Android, is done by our internal teams. And skill development is not very difficult. The best part is that while there are many creative design elements to consider within mobile, a lot of the code will be built on familiar standards. Most of our work is currently being done in HTML5. For Android, we do a lot of Java.

We've tried a few ways to create portals for end users, but the best approach we've found is designing for PC and mobile access at the same time. We start by building our site for the Web while creating a design for mobile. This dual perspective ensures that you do not get caught in any design corners or dead ends when looking across platforms.

I have someone dedicated to these types of projects: Shiva Vannavada is our VP of rich media technology. He has established a model for creating a portability framework, which is essentially a content hub. The hub supports multiple frameworks for its output, but doesn't contain any services itself. This hub can have any number of outputs, including mobile. This model scales well for any number of device types.

TAKE Note

Engaging With Customers

WATCH More than ever before, customers are dictating the experience they have with companies. They are tech-savvy, and IT is stepping up to meet their high expectations. But in industries like finance and healthcare, it is a challenge for CIOs to comply with Financial Accounting Standards Board rules, HIPAA requirements and other restrictions while still maintaining stellar customer service. In this online video, Council members John Dick of Western Union and Jackie Lucas of Baptist Health Systems explore the strategies and tactics they use to turn this challenge into a strategic advantage.
council.cio.com/DE80811

Create Career Opportunities

DISCUSS On-the-job experience is a critical component of career development, and rotations into non-IT positions offer people in the IT organization the chance to get to know more about the business users they work with and customers they serve. But how can CIOs structure rotation programs that provide experience for staff and managers without affecting the functions that still need to be performed? Check out how Council CIOs face the logistical and people-management challenges, and share your own experiences in the ITworld online community.
council.cio.com/ITW0811

Business Leadership Advice

DOWNLOAD In this webcast recording, hear from members of the Council's Executive Women in IT community as they discuss how women can advance in a male-dominated profession. Expanding on discussions from workshops and previous webcasts, the participants talk about the benefits of being a trailblazer and risk taker, gaining a broader view of the business, and identifying the impact of their personal lives on their IT careers. They also provide advice and discuss experiences from their rise to become CIOs and business leaders.
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CEO Denise Morrison (left) and CIO Joe Spagnoletti (right)

CAMPBELL SOUP

Productive Partnership

This CEO and CIO team up for a second time to build customer insight and accelerate innovation

Denise Morrison Joe and I first worked together in the late 2000s at Campbell's North America, where he was VP of IT and I was president. One project we did together was an SAP implementation. The entire leadership team was involved. There was a scorecard and accountability and ownership every step of the way. As a result, we had a flawless implementation.

Now, as we work together again with me in my new role as corporate CEO [beginning Aug. 1], we have to take SAP and the information it gives us to the next level and realize all its benefits.

For example, food price inflation is a big issue in our industry, and we watch commodity costs very closely. The information we get through SAP

is instrumental in identifying and managing our supply-chain costs.

Joe Spagnoletti With a single-instance global system, we understand the total impact of our decisions. We can't change something in one place without affecting something somewhere else. Rather than working in silos, we're collaborating more.

Morrison The leadership skill that you need to work across an enterprise like ours is one of influence. Joe's perspective on the end-to-end process enables him to influence business issues across the organization. It's enormously valuable.

Spagnoletti We're very fortunate that our leadership understands that IT is woven through all the things we do and that we shouldn't make decisions without considering that.

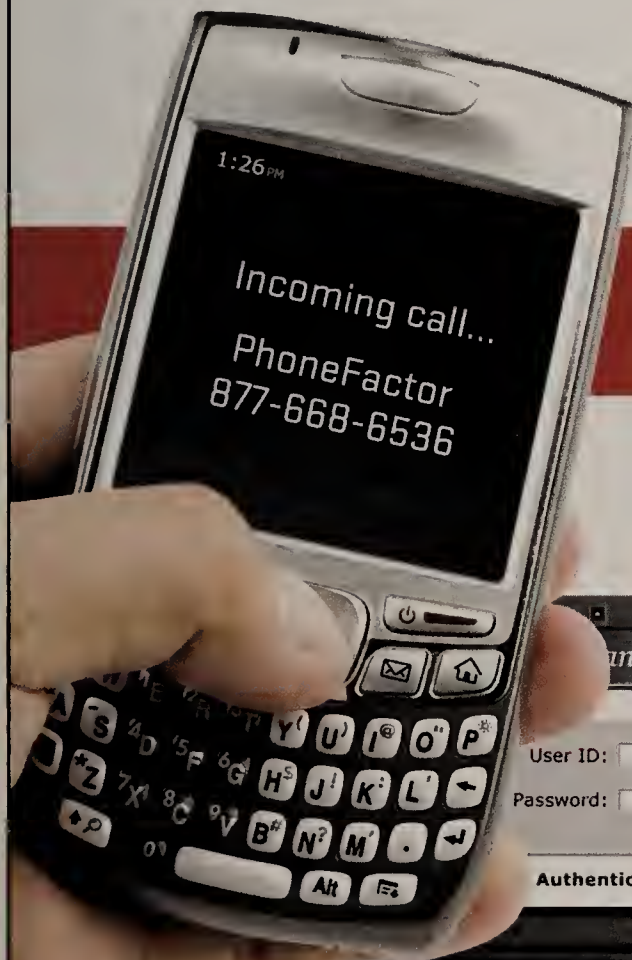
Morrison Another of our business goals is accelerating the innovation pipeline. We have to be in touch with consumer needs, and the processes and analytics IT provides help us turn insights into great products.

Spagnoletti There's too much information available to not take advantage of it. Sharing data with our customers enables us to more effectively undertake joint business planning opportunities and identify opportunities to create more value.

Morrison You can waste a lot of time with a customer on a sales call reconciling when an order shipped and when it's going to deliver. If you can practice good data synchronization and share information in advance of a call, you can devote the time to something that's going to drive growth, as opposed to chasing down an order. Joe and I have had conversations about what the world will look like in five to 10 years in terms of how we connect with customers, consumers and suppliers, and what steps we need to take to win in that world. IT will be a strategic partner in that effort.

As told to CIO Executive Council VP Rick Pastore. View a video interview with Campbell's CEO and CIO at www.enterprisecioforum.com.

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Recipe for Innovation Success

To reap business benefits from IT, CIOs must create a collaborative environment

BY MARTHA HELLER

There are many contradictions in the CIO role: *You are intimately involved in every aspect of the business yet are often considered separate from it. You are the steward of cost containment, yet you must also drive innovation. Technology is critical to your company's success, yet its value is difficult to demonstrate.* In other words, it's a wonder IT innovation happens at all.

Yet CIO magazine has identified 100 CIOs all over the globe who are driving innovative projects to successful completion using leadership, business partnership, strategic thinking and great teams. I spoke with three CIO 100 winners about their "special sauce."

Know your audience. Every CIO knows the blank stare of executives who fail to see the value of infrastructure investments. Steve Agnoli, CIO of global law firm K and L Gates, overcame these challenges with a successful project to centralize data centers and integrate applications and networks onto one platform.

When introducing the project, Agnoli played to the firm's lawyers, whose main concern is client delivery. "We tied the project to what our clients are doing with their infrastructures," says Agnoli. "We did our homework and cited clients, who spend millions of dollars with us a year and are structuring their computing processes in a similar way. Lawyers want to know what is going on with their clients," says Agnoli. "We were able to give them an additional data point."

Establish multitiered governance. In January, Hess completed a transition of its finance business processes and its SAP support processes to multiple global outsourcing providers. The project involved large teams from Hess IT, business units and multiple vendors, so establishing clear lines of communication was important.

CIO Jeff Steinhorn attributes much of the project's success to the partner governance model Hess put in place. "People think of governance as establishing decision-mak-

ing rights," says Steinhorn. "But I think of it as managing communication, operating activities and the rhythm of the project." Steinhorn involved all layers of the organization. "We aligned business and tech specialists with their vendor counterparts so they could establish their daily, weekly and monthly cadence of meetings all the way up to myself and the business executives, where we would hold governance meetings with our vendor executives, including visits to India. We had a structured set of communication activities, which is what good governance is about." (For more on how Hess communicates well, see "Winning Ways to Project Success," Page 26.)

Involve everyone. When Mary Gendron joined Celestica as CIO in 2008, the company was running two manufacturing execution systems—one off-the-shelf and one custom. The manufacturing process is a competitive differentiator for the company, so the executive team wanted to standardize. "It was quite a debate as to which system we were going to use," says Gendron. A cross-functional committee chose the custom solution, but they still needed input and acceptance from the broader business community.

"We used our professional networking platform to give a voice to our internal users," says Gendron, who used a wiki to document requirements. Within six months, the wiki recorded 16,000 visits from a global group of regular contributors, and the requirements definition phase went much faster than in projects managed through conference calls and emails. "It was quite powerful, because everybody felt like they were a part of the project and they could see the results of their input," says Gendron. "The more people you can get into the 'we did it' photo, the better."

"The more people you can get into the 'we did it' photo, the better."

—Mary Gendron, CIO, Celestica

Martha Heller is president of Heller Search Associates, an IT executive search firm, and is a co-founder of the CIO Executive Council. She can be reached at martha@hellersearch.com.

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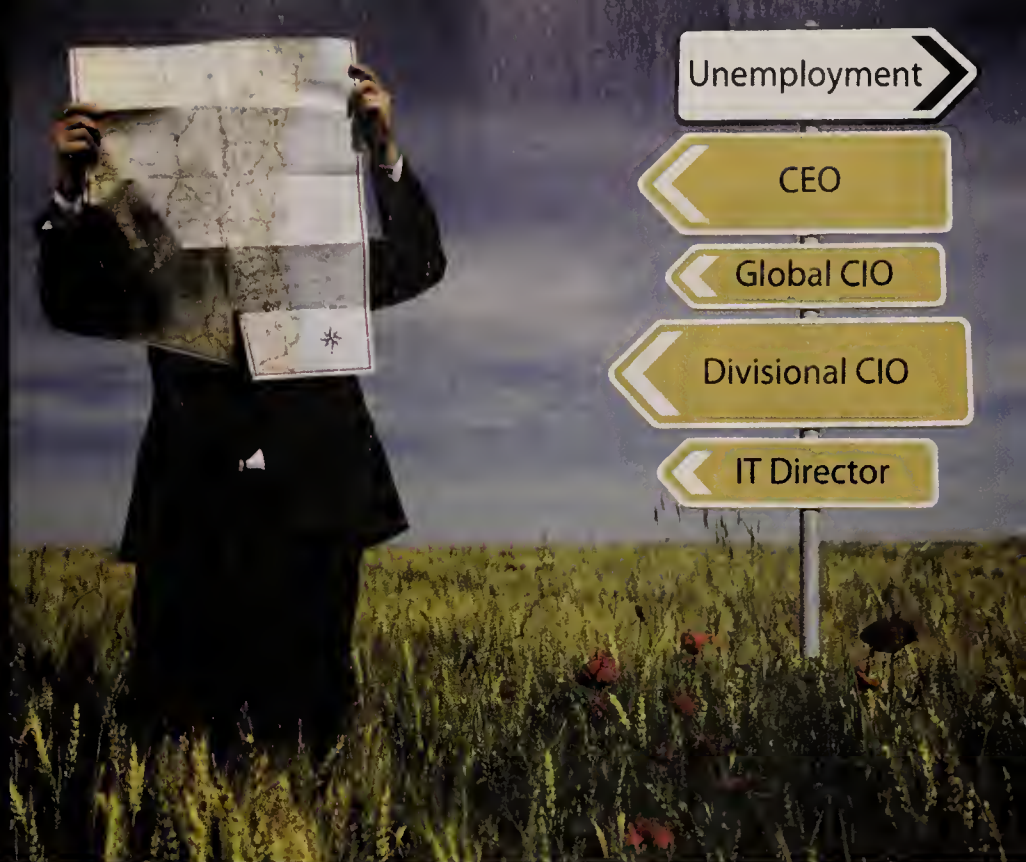
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Color Me Digital



Interior decorating projects often require a weekend at the home improvement store. But PPG Industries has designed a way to select paint colors without collecting piles of sample chips. Its desktop and mobile application ColorClix—a CIO 100 Award winner—lets you follow your inspiration, whether it's from a magazine, a photograph or a TV show. Upload an image to ColorClix, and the app matches it to a palette of paint colors. You can see what a color would look like in a room using ColorClix Visualizer and share it with family and friends over social media. When it's time to buy, a calculator in the app helps you figure out how many gallons to order. Chris Caruso, PPG's global business IT director, says the company, which makes Olympic paint for Lowe's, wants to expand the app to help customers with the whole of their design projects—suggesting furniture and household items, and offering decorating tips. “We want to create a road map that goes beyond selecting color.”

—Lauren Brousell

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